The Harveian Lectures
ON
COMMON NEUROSES, OR THE NEUROTIC ELEMENT IN DISEASE AND ITS RATIONAL TREATMENT.

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LECTURE II. (*Concluded.*)

WHEN we come to consider the case for adults I cannot say I am so hopeful, and one of the best evidences of its intractability is to be found in the number of patent medicines that abound for the cure of asthma. The diseases of children would not keep a quack in bread and cheese for a fortnight. The adults are the patronisers of the various cures for asthma, and who carry Himrod in their pockets and call it a cure, when all the while there never was, and never will be, a better illustration of the toils of the quack; for with each fresh whiff the sufferer is dragged deeper into the abyss of chronic asthma. This is what they come to. I will take my last case, a young lady aged nineteen. Her mother had suffered much from hay fever, and *her* mother had had asthma. She had been an asthmatic since the age of eleven, and she had indicated her neurotic inheritance at a much earlier date by never having been able to eat egg in any form or combination. She sneezes much and suffers much from catarrh. She is now hardly ever free from asthma, but it is worse at night, and she burns Himrod three or four times every night, by which means she gets a fair amount of sleep, although her nights are very disturbed and she is unable to lie down much. Here was the note that her medical man sent with her. "She has suffered almost from infancy from spasmodic asthma. She has taken everything in the legitimate pharmacopœia, and tried with varying success Hare's, and Himrod's, and twenty other quack remedies, besides other nostrums for smoking. She is a frail, weakly-looking girl, but she has admirable courage and spirits, notwithstanding the years of suffering through which she has struggled. She is, as I am, not over-sanguine as to permanent relief." And who could do otherwise than endorse this doleful view? Here was a young lady with years of a baneful habit upon her, a very different thing from a child affected with the same disease; almost the same difference as between the child in its first convulsion and the confirmed epileptic of twenty years or more. To offer her drugs under such circumstances, or rather drugs alone, as the panacea might well seem a mockery, and I began at the other end. I explained to her that the temporary ease that she undoubtedly procured from Himrod's cure—and this remedy is certainly one of the most successful in procuring temporary ease from the distress of the paroxysm—was dearly purchased, and that each release so obtained let her more deeply into the slough of despond. She had got into a bad habit that needed to be broken, and that in the attempt to break it she would at this time of the day of her disease realise to the full the meaning of the words "through much tribulation ye shall enter the kingdom of heaven." If ever there was a heaven to be begun on earth it was to be found for this poor child in the relief of her now constant suffering.

It has not been my purpose in preparing these lectures to deal in any way with the details of treatment by drugs; for there are those here at whose feet I would rather sit in such matters. I have rather aimed at dealing in a comprehensive spirit with the principles that underlie these diseases, and which ought to, and must eventually, energise all our treatment. But lest it should be thought that taking the patient back to, or rather putting her perhaps for the first time in her life face to face with, the problem that she and I had both to deal with—and as I think she far more than I—I was giving her a stone when she came for bread, let me say that I did not send her altogether empty away; but that I believe most firmly in the free administration even in these old cases, and at all times of life at which it occurs, of iodide of potassium and the ethereal tincture of lobelia, for the relief of the asthmatic condition, and that I feel certain that arsenic taken also in free doses, and with breaks, over a long period of time—several months—is a great help by its action on the nervous centres in preventing the recurrence of the paroxysm. I am no friend of the as-he-was and as-he-is description of the results of treatment, but it so happens that a few days ago this young lady, without any asking on my part, thought fit to write this note to me: "I am writing to tell you how very much better I am. I can lie down at nights; I have no asthma after eating; and I never have to burn anything or smoke. In fact, I have hardly had any asthma for the last two months, and the slight returns of it have gone off after one dose of the medicine."

Before I have quite done with asthma let me return again to Himrod and drugs of that ilk. I have made a serious charge against them, and I do not doubt for a moment that there are those here who will abundantly confirm all that I have said. But I want to say more—viz, not only do they confirm this disease of habit; but they do more, for in the long run their repeated use leads to enfeeblement of the heart muscle, and to its dilatation; and thus they introduce serious, and often fatal, complications. Mind, I do not say they must *never* be used—I have seen too much of the distress of bad asthma to say that; but I do say, as I have heard it said of the doctor's brougham, that it is the first nail in his coffin, that when an asthmatic takes regularly to such remedies as these, they are equal to a good many coffin nails.

I come now to the last group on my list for to-night—the neurotic conditions that involve the circulatory system,—and perhaps chief of these is angina pectoris; but I will not take that first, because some might be inclined to question the right of this affection to the title of a neurosis, and even if it has that right, as I think it undoubtedly has in some instances, it is still a little off the lines I have hitherto been considering, and there are other neurotic conditions that may well be considered. And first of all I may allude to the common affection the being the conscious possessor of a heart. It always strikes me as the most astonishing thing that a man may have a heart of twenty, thirty, even forty ounces, and yet be unconscious of its pulsations, although to the bystander the heaving of the chest provokes a recognition of the fact obtrusively. But this heart conscience occurs in quite other cases, and verily it is a sprig from the garden of Eden, for it is a genuine knowledge of good and evil, the good of it being there, but veiled from sight. It is good knowledge if only the possessor could believe it, for it mostly tells that there is nothing serious the matter, and it is evil in that it enshrouds the mind of its possessor in spectral fancies of which he is utterly unable to dispossess himself. Yes! Once to know you have a heart in this fashion is to become full of an idea that it is wellnigh impossible to dislodge, and there is no doubt whatever that it takes a good slice out of the happiness of very many lives. And now comes the point. There are many refuges for the destitute of diagnosis in medicine. A delicate spine is one, a delicate chest another, a torpid liver another, consumption of the bowels another, gout another, neurotic—yes! I will not leave that out—another. We cannot do without them, but there are some that are much more two-edged than others. I do not so much mind a man being told he has a torpid liver, if the doctor does not know what is the matter with him, because the liver is a benevolent deity, and we lay our pills at its shrine without any violent explosion either way, and the public have learned to recognise this. But "delicate lungs" or "a weak heart," which run up a sword over the head of the victim with sudden death, or consumption engraved thereon, when there is nothing serious the matter, and often because we are unconsciously looking after our own reputation, and are afraid of making a mistake which someone else may catch us up in, is not a trifling detail, for a weak heart to the public is as precise a diagnosis as it is vague and unmeaning to the instructed. To us it means nothing, but there are hundreds of people going about and nursing their hearts because they are weak, but with nothing really the matter, and that idea they must have got by medical consent in most cases. Then I have to say that the term is applied to all sorts of conditions that have nothing in common. For example, a stout lady of sedentary habits comes for some trifling ailment, and she starts with the announcement,

"I know I have a weak heart, Dr. So-and-So said so years ago." I examine her heart, and it is, as far as present means of diagnosis go, absolutely healthy. And I have little doubt that Dr. So-and-So, looking at his patient's physique, and judging her rightly of corpulent habit, plumped for a fatty heart, and that case was ticketed. Another lot of hearts are maligned because the first sound is weak, a perfectly worthless criterion, unless hedged round with all sorts of qualifications; and a still larger number because the pulse is small and feeble; and then there come all the multitudinous causes of irregularity of the heart, which in the absence of any definite disease are all liable to go into the same pot, and a pretty kettle of fish comes out of it all if we take the aggregate of results of misery that is produced. I cannot discuss this question very satisfactorily, because there are so many causes of irregularity; but I can say this, that no more common condition exists than the irregularity of the neurotic heart, and though we all know of it I do not think that its very frequent occurrence is as generally remembered as it ought to be. A great injustice is not unfrequently done to candidates for insurance in this way. A man goes up for examination and is nervous under it. His heart is unsteady, and very likely there may be some slight basic or apical systolic bruit as well, and he is warned not to pursue his proposal at the time, but to come again in so many months. What is the result? Naturally the rejected candidate receives a severe shock. Imagining himself sound, he finds there are suspicions about his most vulnerable part—his heart,—and off he goes to "another opinion" to know if there is any chance of sudden death, heart disease and sudden death being indissolubly bound together in the mind of the layman. Far be it from me to seem to be wanting to teach the medical officers of insurance societies their business; they probably know it far better than I, and, moreover, not being attached to any body of this sort, I am very much like the politician out of office, except that I am not trying to get in. But I will confess to having wished, as cases of this kind have come before me, that medical examinations for insurance could be conducted with a little more bilateral poise, for the refusal to grant a policy is really of more moment to the candidate than it is to the shareholders of the company; for I am of course only discussing cases that could add at the most an infinitesimal risk, and yet the one party does not receive a particle of consideration. But having said this, I will let it at once discover my weakness, for it opens up a most interesting question, whether the irregularities of neurotic origin may not in the end lead to some failure of the muscle, and so confirm the fitness of their rejection.

In 1885 I saw a young man who had been refused at an insurance office for an irregular heart. He was brought to me by his own medical man in consequence, and I certainly could not in that instance find fault with the decision, for his heart was tumbling about in a most extraordinary fashion for a man, and such as I have rarely seen in that sex and at that age before or since. I cannot go at length into my reasons for regarding the affection as a functional one; it must suffice to say that the shape of his head, his whole bearing, and the previous history, given me by the gentleman who brought him, who was an old friend of his as well as adviser, showed conclusively that he was an extreme neurotic. He wanted to get insured before he went abroad, and he was obliged to start in some ten days or so. I told him that I was convinced that there was no disease of his heart, but as to getting insured before he went, that was impossible, as it was clear that no examiner would look at him with his heart in that state, and it was little likely to quiet down with an ordeal such as that before him under the circumstances of the hurry. So I advised him to go abroad, and as his refusal had much upset him, to go to some medical man near him, and to have his heart examined frequently, thinking that when he got used to the process he would soon be reported upon more favourably than we could do at that time. My expectations were quite justified, for after some months I heard from him, saying that he had got his life insured, and that now his mind was at rest. I do not think that in the end he had any desire for the insurance as an investment, but merely because it gave him a certificate of the soundness of his heart. He comes to England periodically, and I have seen him several times in the course of the six years that have now elapsed since my first introduction to him, and he has hardly put his foot on shore before he rushes off to me to get his mind set at rest. And here is the point that makes me a little uneasy about him: he has several times had recurrences of extreme irregularity of the heart's action, generally after mental worry, and once in this state I sent him to Homburg, and some one who saw him there, not knowing so much as I did about him, shook his head at him, kept him on one floor, made him go about in a Bath chair, and sent him home again more dead than alive from sheer fright. But although I judge the nature of the case to be a neurosis, I cannot but fear that as he advances in years a muscle or nerves of such irritability may fail under the stress of even ordinary existence, and that he may not live out his term. And yet, on the other hand, the case is much like, in all but the sex, the palpitation that is so common in women, and which does not, so far as I know, do much, if anything, to shorten life. Nay more, it is a condition that may well excite astonishment by the small amount of disturbance that it creates. There may be some amount of discomfort, but even that is difficult to speak of accurately, for going with the disturbed cardiac action there is so much nervous erethism that it is uncertain how much of the distress is due to the one and how much to the other; and how little of anything there may be sometimes is well impressed on my mind by the remembrance of a lady who walked into my room a year or two ago after a morning's shopping in Regent-street, saying that she had had a palpitation all that night and morning, and would I please to give her something to stop it. I found her heart beating 160 per minute, and I do not doubt that it had been doing so through all her peregrinations in the shops of the West-end.

Then, again, there are other cases that seem to suggest that neurotic disturbances may lead to actual organic disease. I saw this case the other day. A man of about forty-four—so far as is known in perfect health at the time; in fact, he was passed first-class for ins[illegible]ce just before he left—went out to the colonies to [illegible]e a very important and anxious financial post. Before he went he had been in the habit of taking a good deal of exercise, and his new berth kept him so continuously occupied that he had not only no time, but neither had he the energy or the inclination for it. His work told upon him severely, and he felt that it did so, and within six months of his taking up his new post he found himself so short of breath that he was obliged to seek medical advice. He was found to have mitral incompetence, and he has had it ever since; and, what is more, he was, so long as he remained at his post, slowly going down hill, until he relinquished it and started for home. Since that time he has, according to his own account, continuously improved. It seems quite possible that the fault here may have been a primarily nervous one; that the man's whole energy was used up by his brain work, and that for the want of its supply the heart muscle dilated, and led to the mitral incompetence at the same time that the body muscles were disinclined and incompetent for their wonted exercise. But of course it cannot be denied that there is, at any rate, another explanation; for the heart that is accustomed to work, as is that of a man who makes it his business to take a good deal of exercise, when thrown into idleness, as it is in great measure when its master changes all his habits of life and betakes himself to a very sedentary occupation, is very likely to grow indolent, and it is the indolent hearts as much as the overworked ones that dilate. As a further point in reference to the influence of nervous failure in producing organic disease, I would add that I have seen one or two cases, though they are happily rare, where, without any definite disease, yet with some permanent sense of discomfort about the heart, a patient suddenly falls down dead, and all that is found post mortem is a dilated heart. Again, it cannot be said that such cases have any certain connexion with any definite nervous cause, but in the one or two cases that I have seen there was a something about the individuals that led me to class them as belonging to the group of the neurotic.

Now this subject leads me on to another that has similar risks—viz., Graves' disease. I have already said that I regard this disease in what may be called its fully developed form as one that shades off in all directions into conditions that are not generally considered in relation with it, but which ought to be so considered, in my opinion. Just now the exophthalmos and the thyroidal enlargement are somewhat at a discount, and we hear more of muscular tremors and some other local phenomena; but what has long struck me is that the central feature

of all these cases is, without any exception, their extreme nervousness. I hope no one will take exception to my making use of this popular term, but it is really an exceedingly useful one. And what do I mean by it? Well, I understand a state of the central nervous system in which the persons start suddenly at the least unexpected noise; in which the least excitement makes them tremble all over or flush, or break out into a perspiration; in which an impulsive word or a sudden act will send their heart into a state of palpitation; they are in a perpetual state of that common and happily temporary one of a nervous man who is about to make his first speech: his tongue gets dry and sticks to the roof of his mouth, his neck swells, and he feels uncomfortable in his respiration; his heart is beating so fast that it would seem that it must stop; and his head throbs so badly that if the memory of pain were not short-lived he would never trouble an audience again. But in this picture of Graves' disease it is not the muscular tremor that is the essential feature; it is not the enlargement of the thyroid that is either, or the protruding eyeballs; all of them are included in the still more fundamental state of decrepit control on the part of the centres, and, whatever it be, it lies deep in them. So that when I see, as one so often does see, a nervous woman or man with a very rapid heart, or excessive pulsation in the neck or abdomen, with undue tendency to sudden sweats, with a want of muscular control, as evidenced by tremor and so on, I see in each of these, outlying symptoms of the condition, whatever it be, that causes the assemblage of symptoms we call "Graves' disease," and which seems to me most aptly likened to a state of permanent blushing of the centres involved. I should like, however, to remark that such symptoms are common to many forms of nervous breakdown. For instance, many of them are found in chronic alcoholism, they are seen in some cases of melancholia, in the decrepit state engendered by overwork, by excesses of any kind; sometimes they occur with glycosuria, and no doubt in many other conditions also. And herein is another point of interest, if I may judge by my own experience—viz., that all these conditions, more or less, are benefited by the same drug—opium. I believe for patients suffering from Graves' disease there are no remedies comparable to the rest and absolute freedom from fussing that are to be procured in a hospital, and there is no drug that does them so much good as small doses of opium, combined with strychnia, cod-liver oil, and all remedies that go to build up the nervous centres.

I can only mention one other condition that has to do with the question of weak hearts—viz., faintings that are supposed to own a cause of this kind. They are excessively common; far more common in women than in men, and they come for an opinion in numbers because the uninstructed associate the condition of fainting with disease of the circulatory centre. Now, except occasionally in old people, is it ever so? If it be, I confidently assert that it is a very rare occurrence; and for myself I can say that of the large number of cases of this kind that have come under my notice, and of which I have notes, in no single instance have I been able to discover any organic disease, and in all there has been ample evidence that they were nerve cases and not heart cases. I need hardly say that faints are often of an epileptic character. I do not wish to assert that all these cases are of that nature, but short of epilepsy there are many conditions that emanate from the nervous system and lead to faints that are altogether outside the heart. The sort of case met with is after this wise. A gentleman aged thirty-three, who has been in the tropics for some years, and has had malaria and rheumatic fever, has had within a short time of returning home two attacks of palpitation, in one of which he fainted for a minute. He has had one slight attack since he came home. He came to me because he thought his heart was affected, but there was nothing discoverable, and as he was very tremulous and nervous I believe it was all brain. Another interesting case of this sort I saw down in the country some three years ago. A lady, aged twenty-eight, had been somewhat recently confined and was anæmic. For some days before I saw her she had been going off into repeated faints, and had kept the whole house in a perpetual panic. I do not know how many nights the doctor had slept in the house to see an attack, but his presence always seemed to keep them off, and he had never see none. The patient was a light-haired, lively, neurotic Irishwoman, subject to vertigo, but with no organic disease of any kind. And yet one more, also in a lady of the same age (twenty-eight), who has been subject to attacks of giddiness for years, but who of late has had most curious seizures that come on quite suddenly while she is walking about. She has all the feeling that she may faint, but never goes quite off; sometimes she goes pale, but more usually she flushes and gets into a perspiration. At the onset of the attacks her heart seems to stand still for a second, and then off it goes into a violent palpitation. The heart sounds were a little irritable, but there was no evidence of organic disease. Of course these cases do not touch the question of fainting in organic disease of the heart, though even there I think it may be said that it is a much rarer thing than is supposed. I remember having a patient of this sort under my care in Guy's Hospital some years ago, and kept him in for some time because the case was so very uncommon in this respect, but even there I was in doubt. He had definite mitral or aortic disease, I forget for the moment which, and he used to have faints; but I believe in that case the heart disease led in some way to an epileptic attack, and that it was not a state of simple syncope. People with dilated hearts may die suddenly from syncope; old people with degenerate muscle may die in like manner, but the fact remains that those who are subject to faintings are very seldom sufferers from heart disease, and it is also the outcome of clinical experience that faints of this kind are not dangerous, and need never excite much alarm for the immediate issue. Practically they occur in boys and girls and women, and are a symptom of a deranged or weak nervous system.

And now let us pass for a few minutes to peripheral disturbances, which, although we do not know much about their pathology, would yet appear to be largely neuro-vascular in their development; "vaso-motor" they are more usually called, but as I am more concerned with central causes than with local, I shall look at the affections concerned more especially from that point of view. We have heard a good deal of recent years of what has been called "Raynaud's disease"—a gangrene of more or less of the extreme periphery, whether it be of the tips of the fingers or of the toes, or of the rims of the ears. This typical or extreme form of Raynaud's disease is decidedly uncommon; but inasmuch as I do not see where to draw the line between this severe disease and a number of slighter grades, it seems to me to be a very common affection. For instance, a lady came to me this morning with some rather pronounced irregularity of her heart, and the symptom she made most of, thinking it to be an important one in relation to the heart disease she supposed she had, was that she always had cold feet. "Madam," said I, "you know the old saying, 'A cold hand and warm heart,' and if you remember that *heart* should be rendered soul or spirit, cold hand or foot means an active brain. It is never a symptom of heart disease. 'It is a good sign to have one's feet grow cold when he is writing,' says the Autocrat of the Breakfast Table." This seems to me the very mildest form of Raynaud's disease; so mild indeed that is no disease at all. And of other mild conditions that are of the same kind I would mention the thin skin and blue hands, sometimes a little swollen, that are seen quite commonly in young women, and sometimes also in children. Closely allied to these is the proclivity to chilblains; and then there are the peculiar waxy or corpse-like fingers, that are described as dead fingers. There are, besides, a number of less well-defined conditions of disturbed sensation—pain in some, numbness in others—which go to complete the picture of the disease. Now all these things are at first sight purely local, and it is of course quite possible that in the future a local pathological process may be assigned to them; but for the present the local changes are of no use to us, we cannot treat them locally, and the far more important point for recognition is that they occur in people of a certain temperament. Herein is shown one of the great difficulties of my subject, for these several manifestations that I have named probably do not occur in the same kind of person; the livid blue hands and the tendencies to chilblains occur in the lethargic neurotic, and in those in whom one may surmise that the play of nerve force is always at a low ebb, the neurosis being one of initial default. In those whose fingers die it is certainly not always so, and I think that it is more the affection of the quick-brained and vivacious. This brings me to remark, as I have not hitherto done, on the wide field occupied by the neurotic temperament. It is seen, indeed, in all sorts and conditions of mental activity—in the most logical, in the

most impulsive, in the most emotional as well as the most unsympathetic and cold, in the strong minded as well as in those who are wanting in resolution. But all these milder forms of Raynaud's disease are found in those who are of this constitution, and the disease must be treated, not by attacking the local change, but by devoting attention to the general vigour of the system. Improve that and you will do something to better the local distress, though one cannot say that the measure of success is any great thing to boast of, or leaves us with nothing to be desired. I have said that such and such symptoms make up the picture of Raynaud's disease, but I am not sure that its connexions are not wider even than I have here indicated, for I have in my mind the case of a little child who has had for a period of many months a curious bullous eruption, that seems to be certainly due to some neurotic disturbance, for it comes on after any little over-excitement. And when I think of this case there are several conditions of the skin, notably pemphigus and its curious control, not cure, by arsenic, various pruriginous conditions, and even such pronounced conditions as psoriasis also, that are by no means without their interest in this regard. Psoriasis particularly is a disease of the neurotic; and had I time there are one or two cases from my note-books where it and distributed joint lesions have gone with general nerve tremor, such as indicated serious nervous failure, while in a few others the disease has been associated with mental failure such as threatened actual madness. One cannot, however, fail to remark that psoriasis in one respect is an exception to the rule I am preaching; for it is a disease that is best treated by local remedies.

But I must leave these questions to say a few words upon angina pectoris, a more important because more terrible disease. And I would repeat here what I said at first, that it is a little off the lines of my present theme, because, although I believe it to be a neurosis in some cases, it is nevertheless a neurosis that cannot be treated on general principles, nor can it be said that it occurs in those of a neurotic temperament to any marked extent. There was a discussion a few months ago at the Medical Society on this subject of angina pectoris, but what I have to say on the subject was said several years ago in the Guy's Hospital Reports, and is not in any way inspired by that discussion. I say this because I had independently arrived at certain opinions as the result of my own observation, and they are therefore additions to any consensus that may be in course of formation on the disease. I had it on my lips to say that I have nothing new to add to what I wrote in 1887. But I have this addition to make, that whereas I thought that there was a neurotic element in the disease then, I think still more so now, with a considerable addition to my then experience. Of late years the explanation of the attacks has all gone upon one line, that the disease is due to a rise in tension in the arterial system, and this suggestion we owe chiefly to an observation of Dr. Lauder Brunton. The late Dr. Hilton Fagge adopted that explanation, and considered the fact sufficiently established by the therapeutic results so frequently obtained from the use of the drug recommended by Dr. Brunton on the ground of his observations. But these observations were made upon a case of angina with aortic regurgitation, and I do not think they carry much weight for the general run of cases. Angina pectoris clearly comes on in some cases of advanced heart disease associated with high tension, and sometimes this is so with aortic disease, sometimes with the large and dilated heart of renal disease. But it is only quite exceptional that this result happens in these diseases, for one case with angina there are many that show no such feature; and, on the other hand, I consider that the characters of the pulse in the greater number of cases enables us to say that the arterial tension is not high. There can be no doubt that angina comes about through a number of conditions, in which the only common factor is muscular fatigue. Arterial tension will produce this; so also will dilatation; so also will badly nourished muscle, whether this be due to starvation from disease of the coronary arteries, to senile degeneration of the muscle, to fatty changes, to ptomaine-poisoning, to the circulation of uric acid in the blood, and so on. And the remedies that are so useful, nitrite of amyl and nitro-glycerine, without throwing any doubt on their power of relaxing arterial tension, are none the less also relaxors of muscular spasm and cramp. I believe it is by virtue of this power more particularly that they work their effect in the disease under consideration. This hypothesis of heart cramp consequent upon heart fatigue is one that adapts itself to all the conditions under which angina is known to occur. But I am only concerned to-night with that form of the disease that occurs without any definite structural change; with those cases in which apparently healthy men are suddenly seized with pain which may kill them within a very short space of time, and yet the heart's action may be hardly, perhaps not at all, disturbed, and the sounds are practically normal. Supposing that the attack passes off, it leaves behind it the painful uncertainty, such as hangs over the epileptic, that another may come at any time. Trousseau, with his clinical acumen, seized upon this parallel with epilepsy, and considered some cases to be of the nature of an epileptiform neuralgia, and others also of a neuralgic nature from their frequency in the gouty. There are, indeed, several features of many of the attacks that further this idea: they are often accompanied by troublesome flatulence, by flushings in the head and face, by tingling in the arms, which all remind one of the erratic performance of electric apparatus during violent atmospheric disturbances. I have suggested, too, that in the crises of tabes dorsalis and diabetes there are instances of severe abdominal neuralgia, to which this thoracic crisis or angina is in many respects comparable. I may further add that it is often associated with a very sudden bronchial storm that can only be called acute bronchitis; and although we make much of it as a distinct affection, it is closely allied with, and sometimes very difficult to distinguish from, the attacks of air hunger in their more extreme degrees that are seen in uræmia and in states of cardiac failure. These and such as these are probably all ordained from a worried nervous centre.

Now these cases of angina that exhibit a distinctly neurotic type are they that loom more largely as one's experience grows, and which enshroud the whole subject in difficulty. I look up my notes of angina, and where it was obviously due to disease of heart or kidney they are gone; but where there was no discoverable affection I could give several where the disease has been absent several years; I could give others where the recurrence has been frequent and yet no harm done, the attacks being, it is needless to say, mild ones. And then there are a very large group of cases where one remains in doubt whether the symptoms have any import of serious kind. As a good illustration of this sort I may mention the case of a man who came under my notice only a few days ago. He is forty-seven years old, and this is his tale: His father died of Bright's disease. A year ago he had much worry with the illness and death of his wife, and at that time he had an attack of paralysis of his sixth nerve. His trouble is flatulence. He fills with wind after his meals, generally some two hours after, and it not only wakes him up, but he cannot walk more than a few minutes without stopping. The wind seems to get up under his heart. If he can rest comfortably in a chair he would be free; but as soon as he gets into action, as he calls it, a fermentation seems to start, and fills the top part of his body. His complaint has upset him and made him nervous, and now if anything worries him an attack comes on. Now with all this rigmarole poured into my ear you will not wonder that I thought him a wretched neurotic, and more particularly because he clinched his doleful tale by, "Mother says we are a windy family." But as I talked to him I found that he had had bad pain frequently when out walking and on going up slight hills, and that a few seconds' rest relieves the pain; and on he goes again. He further volunteers the statement that when the pain is bad he could not move a step even to grasp a thousand pounds. Add to this that he had a very metallic and ringing second sound, and that his arteries were thick; and I ended by thinking that we had, under the garb of a rather pronounced neurotic temperament, to do with a true angina. And in relation with this case I will mention another where I made a mistake by doubts of this kind.

A lady aged sixty-one, who had had a good deal of fever in India, and who for many years had neuralgia in the ovarian region, which as it passed off was replaced by neuralgia in the head, for some months had had a great deal of discomfort in the chest and throat. She had been seen by a very eminent physician in London, and nothing but incipient asthma discovered. She had been treated by bismuth, and soda, and such like. But she got worse, and used to sit gasping over the fire at night, with a nasty pain in her chest and a choking feeling in the throat, but no palpitation. She had got decidedly better of late under strychnia and nitro-

glycerine tablets, but she had rather a bad pain the night before I saw her. I judged her from her manner to be decidedly neurotic. She had a quick pulse, and complained of a tingling in her arms down to the tips of her fingers, but she moved about without distress or shortness of breath. The heart was evidently large and dilated; and there was a basic systolic aortic murmur of no great intensity. There was no sign in any of the viscera that the heart was failing. It seemed from all the evidence at my disposal that the heart muscle must have failed of late, and that the angina was due to this cause, and it seemed that, as she had improved under careful treatment, there was every hope that she might continue to do so. Moreover, it was impossible to be sure how much of the pain and choking sensation she suffered from was due to her neuralgic habit. Altogether I judged she might move about a little more and take her tablets of nitro-glycerine a little less, for I was rather afraid that she might get her nervous circulatory and muscular systems, whichever of these was acted upon by the remedy, into an unstable or oscillatory condition that might render her recourse to such means of too frequent occurrence. I know not what extent of freedom she considered my advice warranted, or even if she had acted on it in any way; but, anyhow, it clearly tended in the wrong direction, and three or four days after I saw her she was suddenly seized with a bad attack of pain on retiring to her room at bedtime, and she died.

The remedy for the anginal paroxysm is unquestionably nitro-glycerine or nitrite of amyl, and perhaps in so terrible a disease, and one in many cases of which it will ever be difficult to say whether any structural change is at the bottom of it or not, it may seem unwise to go behind the fact that we have a drug that in most cases has a decided power. But it is not really so, because no thoughtful man can have seen many of such cases without having often asked himself the question whether he is doing the best for the patient by keeping him from all exertion and telling him to consume a tablet when his pain threatens. And this much is certain, that, control it as much as the remedy may, it is in a fair proportion of cases only controlling a symptom, and the cause of it is deeper. In my opinion, then, angina sometimes constitutes a disease for which the gastric crises of locomotor ataxy and diabetes afford the nearest parallel; in others, perhaps, the condition of calf cramp comes nearest to it in likeness. In the one it may possibly be due to the uric acid diathesis, in others to the explosive nervous discharges that are well known to take place in the worried and overworked. I must not take leave of the subject of angina, though, without alluding to that always to me curious and interesting affection of women—the common and well known pain in the left side. Has it or has it not anything to do with the true disease? It would appear to be a very troublesome affection; it lasts so long and is so difficult entirely to displace. It is curious that it should occur so seldom in men, but one may suppose that this has to do with the associated anæmia with which it so commonly occurs, and which in anything like a corresponding degree is so seldom seen in males. And the fact that it does so occur in anæmic women only is perhaps an evidence in favour of it being something of the same kind as the true disease, for if, on the one hand, we consider angina as a condition due to fatigue, we have in these women the bloodless condition best suited for its easy production; if, on the other, we like the better the neuralgic origin, we have, too, under such circumstances, all the elements that seem best fitted for the calling out of the pain, and abundant evidence that it is the parent of any number of neuralgic affections. But whether this pain in the left side be related to true angina or not, it is quite certain that, except there be a probable cause for it in the existence of cardiac disease, true angina never occurs in young women; and when I consider that I have several times been asked to see young people supposed to be suffering from this serious disease, I imagine that the fact is not known so widely as it might be.

These constitute, I think, the most prominent circulatory conditions that can be fairly contended to be due to neurotic outbursts. But there are others of which, had I time, I should have liked to have given what evidence there may be in favour of a nervous fault of some kind being at the bottom of them. And of these other states I should have most to say, perhaps, in favour of the neurotic element in chlorosis. We are all familiar with the fact that severe shocks occasionally produce a sudden and bad form of anæmia; that observation is as old as the hills. But I think I could show that chlorosis is a disease that occurs in families, that it is associated with well-marked vagaries of nervous action, and that it is a disease that dogs the patient and is liable to relapse from time to time. I cannot, however, pursue the subject here, for I must in the next lecture pass on to consider the abdominal neuroses.

Clinical Lectures
ON
STRICTURE OF THE ŒSOPHAGUS,
WITH FOURTEEN ILLUSTRATIVE CASES, IN FOUR OF WHICH GASTROSTOMY WAS SUCCESSFULLY PERFORMED.

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LECTURE II. (*Concluded.*)

THE diagnosis of organic stricture is usually easy. In this disease the points to be considered are similar to those laid before you in discussing the diagnosis of cancer of the gullet, so that I need not now repeat what I then said. The history of injury, followed immediately by painful deglutition, which after a few days or weeks passes off, and is, at a more remote date, followed by a steadily increasing dysphagia, unassociated with pain, hæmorrhage, or enlargement of lymphatic glands, points to organic stricture. In many cases, however, a clear history cannot be made out. The patient may have injured himself while under the influence of alcohol, during an attack of insanity, or for suicidal purposes, under which circumstances no definite history can be had, or the injury may have been received so long ago as to pass from the memory of the patient. Again, it must not be forgotten that injury may lead to carcinoma, as well as to cicatricial stricture, but as a rule it is protracted irritation—for example, the repeated swallowing of strong alcohol—that brings on malignant disease, whilst transitory and severe irritation produces a cicatricial stenosis. The absence of pain, of hæmorrhage, and of enlargement of the lymphatic glands is, as a rule, a most important indication that the stricture is traumatic rather than malignant. But while this is so you will not uncommonly meet with cases of carcinoma where, during almost the entire course of the case, not one of those symptoms is present. The history of the case, the age of the patient, the character of the dysphagia and of the discharges, usually lead you to a correct diagnosis.

Tertiary syphilitic disease may cause dysphagia either by the formation of a gumma or by the contraction of an old cicatrix. Two years ago a gentleman came from New Zealand to consult me regarding a marked difficulty he had in swallowing, and on inquiry I found that the dysphagia had developed slowly and steadily during the previous five months, and was unassociated with pain except on swallowing. There had not been any hæmorrhage, and until recently he was able to swallow semi-solid food. On examination I found a swelling behind the larynx, which pushed that structure forwards and to the left side, but did not interfere much with respiration or phonation. On passing a round No. 10 bougie a distinct obstruction was found behind the larynx, but the growth seemed to me to occupy the posterior wall of the gullet only. This circumstance made me inquire more carefully into the history of the patient, who informed me that he married immediately before leaving this country twenty-five years ago, that he had a large family, and that he always enjoyed perfect health. After much difficulty I succeeded in collecting facts which proved to me beyond doubt that four years before emigrating he suffered from a hard chancre, but after the first eighteen months he suffered from no constitutional symptoms until the growth in the œsophagus formed, and which I diagnosed to be a gumma. The patient was

placed upon mercury and iodide of potassium, and within six weeks the growth disappeared. This is the only case of syphilitic disease of the œsophagus I have seen.

Only a few words require to be said regarding spasmodic stricture of the gullet. This disease is neither so serious nor so common as the lesions we have been considering up to the present time. You have not seen a pure and simple case of spasmodic stricture of the œsophagus during the present session, but you have observed two cases in which cicatricial constriction was associated with contraction of the muscular structures. And here I may observe that I question very much the existence of spasm of the fibres of the muscular coat in an otherwise healthy œsophagus. In the examples of this disease which I have had the opportunity of observing, the lesion seemed to me to be very similar in its pathology to spasmodic stricture of the urethra; that is to say, the spasm was partly induced by undue local irritability, and partly by the temperament of the individual.

CASE 13.—In February of 1890 a very instructive and interesting case came under my notice. A man about twenty years of age consulted me, and stated that six weeks previously, while dining with a friend, a spoonful of soup which he had swallowed was suddenly and forcibly ejected from his throat; on again trying to swallow he found it impossible to take either fluid or solid food, but in the course of the evening he was able to enjoy a good meal, without any difficulty in swallowing. From that time till I saw him he complained of more or less dysphagia every day. On some occasions it was slight and could be easily overcome, while on others he experienced a complete inability to take any kind of food, or when he did succeed in forcing diet into the œsophagus, the bolus was immediately expelled with considerable force. He found that when he took food in company with others that he was more likely to suffer from dysphagia than when he took his meals alone. These attacks as a rule came on towards the end of a meal. When I saw him for the first time he was much excited, so that it was with the greatest difficulty I made a satisfactory examination. On passing a large and firm bougie I found it could be easily introduced into the œsophagus; but when it reached a point ten inches and a half from the teeth it met with a very marked obstruction, which, however, was overcome by steady and continued pressure. At a subsequent visit I introduced a small-sized gum elastic instrument. It detected an obstruction at the same point, but immediately the bougie was ejected and thrown into a coil in the pharynx. I then passed a larger and firmer bougie, and as soon as it reached the obstruction I released my hold, when the œsophagus forcibly and quickly contracted so as to throw the instrument out of the patient's mouth. The man was then placed under chloroform, and an examination was made with the electric œsophagoscope, when I found at a point corresponding to the site of obstruction an inflamed area about an inch in length, but free from ulceration. I kept the patient in bed, and directed that he should have only barley water, milk, and soup by the mouth, supplemented by nutrient enemata. Within three weeks he could swallow without any attack of dysphagia; on the twenty-ninth day after the treatment was commenced I could pass a full-sized bougie without finding any obstruction, and since then the patient has enjoyed perfect health.

Spasmodic stricture is not frequently observed in men; as a rule it occurs more commonly in the female. This disease is frequently met with in young women between the ages of twenty and thirty; but it may be seen in persons under these ages or even later in life. It is not infrequently associated with nervous affections, such as epilepsy, chorea, hysteria, or dyspepsia, intestinal worms, tetanus, hydrophobia, and hypochondriasis, or it may be induced by uterine and ovarian disease, or associated with gout and rheumatism. You will therefore observe that it is not only necessary to consider the symptoms of local disease, but it is also imperative to inquire into the general health of the individual, and determine whether the patient is the subject of any other lesion likely to induce, either directly or indirectly, spasm of the gullet.

The statements of patients suffering from this disease must be received with caution, as they almost always greatly exaggerate their suffering; and although they inform you that they have been unable to swallow any food for days or weeks they almost invariably are well nourished, presenting, therefore, a very different appearance from those who are affected with organic or malignant stricture. While by themselves, such patients usually succeed in taking a good meal, but if watched, or even in the presence of others, they fail to swallow food. From what I have already said you can have little difficulty in distinguishing this disease from those previously brought under your notice. The symptoms occur in excitable subjects, the dysphagia comes on in paroxysms usually in the middle or towards the end of a meal. Food is regurgitated with force immediately after swallowing, the point of obstruction varies from time to time, and when a bougie is passed and steady pressure exerted the stricture is overcome, or the instrument, if relieved, is forcibly ejected; there is no emaciation or cachexia; pain is not complained of as a rule, unless when a bougie is being passed, nor is there any enlargement of lymphatic glands.

Having laid before you the various diseases and the methods of distinguishing the one from the other, I may now ask you to consider the general question of prognosis in cases of stricture of the œsophagus. The prognosis in cases of carcinoma depends upon the nature and situation of the disease. If no operation be performed for the relief of the patient, then the great probability is that he will die from starvation sooner or later, according to the situation of the primary disease. When the tumour originates in the upper part of the gullet, complete dysphagia may develop within a few weeks of the onset of the first symptoms, and the patient may succumb after only perhaps two months' illness. On the other hand, carcinomatous disease of the lower end of the gullet may run a very slow course, so that the patient may live for many months. Again, cases of scirrhus are as a rule more chronic than those of epithelioma or soft cancer; and, indeed, as I have demonstrated in the cases shown to you, the progress of the first-mentioned variety of cancer is far from rapid. In some instances—as, for example, in Case 7—considerable improvement may take place as a result of rest to the parts after gastrostomy, the rest permitting inflammation and spasm to subside, or, as in Case 5, the power of swallowing may improve as a consequence of ulceration and sloughing of the tumour. When the latter condition is developed new dangers present themselves—namely, rupture of the œsophagus into the surrounding parts. Cases have been recorded where communications have been established between the gullet and the posterior mediastinum or the peri-œsophageal adipose tissue in the neck, where inflammation of a more or less serious character has resulted therefrom. But in the great majority of instances, on account of the chronic local irritation, adhesions form, which unite the gullet to the neighbouring organs. For example, in the cavity of the thorax the œsophagus may become bound to the pericardium, pleura, air passages, or to the great bloodvessels, into any of which structures rupture may take place. I have already shown you an instance (Case 5) where rupture occurred into the aorta, and resulted in fatal hæmorrhage, and on the table I have four specimens, three of which I placed in the museum. These illustrate how death may be caused by a communication being established between the œsophagus and the air passages. In the first specimen the epithelioma occupies the œsophagus at the level of the bifurcation of the trachea, and led to acute inflammatory changes in the lungs, the apices of which were softened and completely destroyed, while the pleuræ were adherent. The second case is very similar. The tumour occupies the same position. The œsophagus is completely destroyed by gangrene for a distance of about two inches, and the left lung was, at the post-mortem examination, found to be also gangrenous. The third case is one of special interest, as the first stage of gastrostomy was performed by me previous to the occurrence of rupture.

CASE 14.—The patient, H. P——, aged sixty-six, a warper, was admitted to the Glasgow Royal Infirmary on May 18th, 1888. He stated that about six months previous to admission he became affected by a cough, which was spasmodic and very irritating, but unassociated with much expectoration. Up till the time of admission this cough has been present without cessation, and during the last three months the patient has had considerable difficulty in swallowing. This dysphagia has daily increased. At first he experienced difficulty in swallowing solids, and afterwards in swallowing semi-fluid food, but now even simple fluids, such as milk or soup, pass into the stomach with difficulty. The patient has always enjoyed good health, has not suffered from specific disease, nor does

he know of having sustained any injury to the gullet. On passing a bougie into the œsophagus an almost complete obstruction was discovered fourteen inches from the teeth. On account of the situation of the stricture—namely, the bifurcation of the trachea—it was considered advisable to make a critical examination of the chest, in order to discover whether or not the obstruction might possibly be due to the pressure of an aneurysm. I asked my colleague, Dr. Gemmell, to make a physical examination, and he assured me there was no positive evidence of aneurysm. I then endeavoured to pass a small-sized bougie, and after some difficulty succeeded in pushing a No. 8 through the stricture. On June 13th the difficulty in swallowing had so increased that it was evident that unless a radical operation was performed the patient would speedily succumb. After a consultation with my colleagues, it was agreed that gastrostomy should be performed immediately. I therefore operated in the same manner as in the foregoing cases, and nourished the patient by nutrient enemata and suppositories. After the operation the patient was able to swallow small quantities of milk without much difficulty. During the first twenty-four hours he seemed to gain strength, but on the second evening it was noticed that when he swallowed milk or other fluids they immediately caused an attack of coughing, during which the food was expectorated. This change suggested rupture into the trachea, and prevented the administration of food by the mouth. On the third day after the operation symptoms of acute bronchitis developed, and the patient was so weak that little hope was entertained of his recovery, and on the fourth day he died from collapse, associated with considerable difficulty in breathing. At the post-mortem examination an epithelioma of the œsophagus was found at the level of the bifurcation of the trachea. The surface of the growth was slightly irregular, and its lower and upper margins overlapped the healthy mucous membrane. The œsophagus was firmly adherent to the aorta, to the trachea, and to the bronchial tubes, and there was a rupture large enough to admit the little finger between the gullet and the left bronchus. This perforation was evidently of very recent origin, its edges being soft, irregular, and sloughing. No secondary formations were discovered.

The fourth case was placed in the museum by my predecessor, the late Dr. David Foulis. It is one of epithelioma of the œsophagus ulcerating into the right pleura. The preparation shows the lower part of the œsophagus, the cardiac orifice of the stomach, and a portion of the liver. The lower part of the œsophagus is occupied by a tumour which involves the entire circumference of the tube, and presents an extremely irregular and somewhat warty surface. The tumour occupies about three inches and a half of the length of the œsophagus, its lower margin being about two inches above the cardiac orifice. But just beneath the lower termination of this main tumour there is an isolated globular mass (seen in section) which projects into the tube, and is attached by a comparatively narrow base. Towards the right side the surface of the general tumour presents ulceration, and here a direct communication exists with the right pleura. In the specimen a portion of the pleura is preserved, and the aperture is shown, the pleura being held on the stretch by a piece of whalebone. On examining this pleura before any of the contents of the chest had been disturbed, it was found to contain a grumous fluid with the sour odour of the contents of the stomach, while the surface of the membrane was coated with soft lymph. The tumour in the œsophagus presented the structure of epithelioma, and the same form of disease was found in numerous lymphatic glands. The liver also and the kidney contained a few secondary formations. The history of the case, which was under Dr. Perry, shows that symptoms of difficulty of swallowing, and pain began about five months before death. A violent pain attacked the right side of the chest two days before death, and auscultation detected the usual signs of pleurisy.

These cases illustrate sufficiently the mode of death otherwise than by starvation. I have, however, collected the statistics of 566 cases of carcinoma of the œsophagus, with the following result respecting the cause of death:—

Collapse and exhaustion	390
Inflammation of lung, including gangrene ...	91
Pleurisy	53
Peritonitis	17
Perforation into heart or bloodvessels	15
	566

The prognosis in benign tumours of the gullet depends upon the position, size, and rapidity of growth of the neoplasm, and whether or not it can be removed by operation. When situated high up it may be cut off or ligatured, or if pedunculated and soft, the parasol-probang may dislodge it. But should the tumour be situated so as not to be capable of removal, then, in expressing his views as to the prospects of the patient, the surgeon must consider the situation of the growth and whether or not it is likely to interfere with other functions than those of swallowing. When the growth is slow, usually compensatory dilatation of the œsophagus occurs. The prognosis in cicatricial stricture of the œsophagus depends upon the extent of the stenosis and the period at which the patient is seen. Unfortunately, the tendency is for patients to delay seeking advice till the gullet is almost completely closed, and then not infrequently the obstruction is so great that it is almost impossible to dilate with bougies. The most difficult cases to deal with are those of attempted suicides who have swallowed strong mineral acids. In such instances the patients delay asking advice till the very last, and usually the injury is very extensive and the stenosis intractable. When the poison is taken by accident the quantity swallowed usually is much smaller, and the stenosis more limited. Before forming an opinion as to the ultimate result you must also inquire whether there is more than one stricture, and ascertain their situation. When a bougie, even a small one, can be passed the prospect of ultimately dilating the stricture is considerable, but if no instrument can be got through, the danger to life is very considerable. When it is ascertained that the organic stricture is incurable, then resource must be had to gastrostomy. It is in these cases that this operation is most successful if performed sufficiently early. Cicatricial stricture may exist for many years before the patient succumbs to inanition. The narrowing of the gullet may take place slowly, and in order to overcome the greater difficulty in swallowing a gradual hypertrophy of the muscular fibres occurs above the constricted point. Therefore the muscular force being increased, the patient may succeed in taking nutriment through a very small passage. The whole question of treatment now comes to be considered, but this I leave to our next meeting, which we shall devote entirely to the subject.

THE BEARING OF RECENT BIOLOGICAL RESEARCHES ON THE PRACTICE OF MEDICINE AND SURGERY.

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(*Continued from page 195.*)

IN several recent papers, especially those from the pens of Metchnikoff, Ballance, Sherrington, Ziegler, Burdon Sanderson, and Ruffer, many interesting facts bearing on the healing of wounds have been recorded. These facts have been interpreted by different observers according as they were biased in favour of the greater importance of chemotaxis or phagocytosis in the setting up of inflammatory processes. Whatever may be the explanation given of these facts, they are placed on record for each to draw his own conclusions, and, without going into detail, we may give in a summarised form some of the more important of these observations, especially as they bear on the process of healing.

It is well to bear in mind that the process of repair, whether in the healing of ulcers, the making good of ruptured muscle, or the union of the fractured ends of bone, is essentially the same; the appearances and results, however, being considerably modified according to the amount of tissue lost, and also according to the amount of extraneous or temporary supporting material that is thrown out into or left in the wound—material which may serve as a scaffold for the support of the true organising tissue by which it is ultimately absorbed. Further, according to the amount of stimulation or external irritation the healing process may be considerably modified, so that we may meet with all intermediate stages from heal-

ing by first intention to healing of an ulcerated surface by granulation. We know, for example, that if a clean incision with a sharp knife be made into soft tissues, the hæmorrhage be allowed to cease, and all blood be carefully sponged away before the two surfaces are again brought into apposition and then kept there by gentle pressure, in the course of a few hours the wound is so far healed that it requires some little effort to again open it up, and in three or four days healing may be almost complete. In such a case the amount of lymph thrown out is exceedingly small, just enough to form a glazing over the cut surface; there is little distension of the blood-vessels, and the surfaces are only slightly redder than normal; so that if the film of coagulated fibrine is merely sufficient to keep the lips of the wound in temporary apposition, the process of organising can go on under the very best possible conditions. The less lymph there is to be removed by the leucocytes—the fewer vascular changes we find at the seat of operation, the less bridging across the connective-tissue cells and the embryonic blood-vessels have to do—the shorter is the time required for the process of organisation and healing. Any method that the surgeon can devise to bring about the conditions above mentioned will favour more rapid and at the same time more perfect results. If Metschnikoff's phagocytes have taught us nothing else, they have brought into prominence the all-important fact that before repair of any kind can go on in the body all injured and dead tissues must be removed. If they are not removed by the surgeon, or are actually brought into existence by the surgeon's knife or by his rough handling or injudicious use of chemical substances, they will be removed by a force of scavenging phagocytes that will be brought up for the purpose, and until these have done their work the process of repair cannot be completed; for suppuration, whether in a wound on a small scale or in an abscess on a large scale, is the result of an attempt on the part of the organism to free itself of materials that are interfering with the process of repair. We now know that this suppuration was by the older surgeons looked upon as a good, healthy process, because by its presence it affords evidence that the tissues of the patient, as represented by the leucocytes, are still able to react, and are setting up a barrier against the invasion of foreign matter at the same time that they are endeavouring to get rid of it. Theoretically, of course, there can be no healing without inflammation, because no incision can be made into the tissues without some parts being injured and bruised, even when the incision is made with the sharpest of knives; but this inflammation, with its vascular and connective-tissue changes, may be kept within such limits that we say inflammation is practically absent, its manifestations are so slight. These considerations have led surgeons to exercise infinitely greater care than they did at any previous time in the treatment of any parts on which they have to operate. A blunt knife is rejected not merely because it interferes with the neatness of the operation, but because the bruising of the tissues caused by the blunt edge, as compared with a keen blade, may make all the difference between healing by first intention and a prolonged and tedious process. Any rough handling of delicate tissues, any squeezing with forceps, any bruising of muscle or of connective tissue when prising out fragments of bone, are now carefully avoided because the surgeon is satisfied that the more these tissues are injured so much the less able are they to perform their regular work, so much the more do they become effete, and so much the more do they require to be removed by an exaggeration of a normal process—an exaggeration which merges into or constitutes a process of inflammation.

It was at one time held, first by Cohnheim and later by Ziegler, that leucocytes are the all-important factors in the process of repair, that not only do they remove dead material, but that from them are formed the new tissues by means of which any gap is filled up. This doctrine, at one time so popular, and still accepted by many, was very keenly combated by several observers abroad and by D. J. Hamilton in this country more than a dozen years ago, who held that the leucocytes simply play the part of scavengers and feeders, and that the actual process of organisation is carried on by larger cells, which result from the proliferation of connective tissues and other cells. Returning to our collection of pus cells—which are really leucocytes that have succumbed during the active scavenging process,—if it be not of large size it must be ultimately absorbed, and in this process of absorption we find that another factor comes into play. Leucocytes at the margin—that is, those that have come directly from the dilated vessels—do part of the work, but the main bulk is carried on by the larger connective-tissue cells, which after some time (that is, much more slowly than leucocytes can be brought up) proliferate where foreign bodies or irritant materials of any kind are present. The wall of an abscess in such a stage may be looked upon as a granulating surface, similar in many respects to that of an ulcer throwing off dead cells, the vascular loops, with the appearance of which all are familiar, the exudation of leucocytes, the proliferation of connective-tissue cells are much the same on any healing surface; but it is specially on the presence of the proliferating connective-tissue cells that healing depends after the pus has been evacuated or absorbed. The leucocytes may play a very important temporary part, as we have

FIG. 1.

Engraving of a healing wound of stump about fifty hours after operation (× 75). Near the surface (*a*) is a mass of detached epithelium mixed with blood and fibrinous lymph. Beneath this (*b*) to the left of the lips of the wound the epithelium is seen. The dark band (*c*, *c*) marks the line of incision, and is due to the presence of an enormous mass of blood pigment, much of which has been taken up by microphages or small leucocytes; whilst at certain points some larger cells, macrophages (not seen in this illustration), contain masses of pigment and small cells in various stages of degeneration in which in turn pigment may still be seen. The larger black patches (*d*) represent masses of blood pigment, with here and there some shrivelled or degenerating red blood-corpuscles. The small black points represent leucocytes, which are present in increased numbers only where the pigment is to be removed in order that the healing process may be completed.[1]

already seen; but the connective-tissue cells, whilst continuing the scavenging and helping to remove the leucocytes that have already played their part, ingesting them, and utilising them as food, have a further work to do. They form not only the new connective tissue, but also the embryonic blood-vessels, the new blood-vessels being apparently nothing more than tubes formed of large connective-tissue cells of the endothelial type.[2]

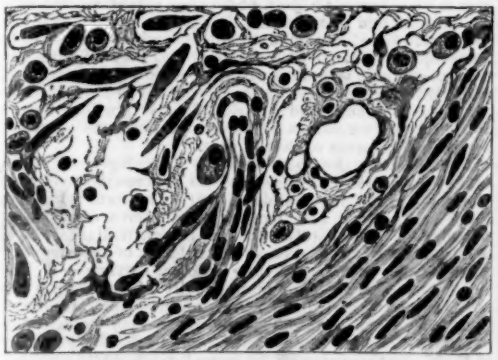
Growing from the cells which actually form the walls of the minute vessels, or from cells immediately surrounding

[1] The drawings of the engravings illustrating this paper have been made for me by Mr. Richard Muir, to whom I am greatly indebted for the extreme accuracy with which he has transferred to paper the appearances presented under the microscope.

[2] The more mechanical protrusion of vessels on unsupported surfaces may be an important factor in vascularisation, but there are certainly other and even more important processes which can usually be followed out near the surface of a healing wound.

them, there may frequently be observed single rows or small columns of cells which appear to shoot outwards into the fibrinous lymph; into these columns the blood usually makes its way, as a channel or lumen is formed between which and the original vessel communication is maintained or set up. In some cases these new vessels appear to grow outwards and the proliferation to take place always a little in front of the advance of blood, but in others it appears as though a single row of cells is formed, and these, proliferating, form a more complete column, which gradually opens up to receive blood. It is scarcely necessary to follow out the healing process further, as it is with the points here mentioned that we have specially to deal; but we may point out how intimately inflammatory and healing processes are bound up one with another, and how every step in the process is merely preparatory to a succeeding one, and that in many, or even in most, cases temporary makeshifts are resorted to in order that the way may be prepared for the formation of more permanent structures. First, there is the dilatation of the bloodvessels, accompanied by softening of the cement substance between the endothelial cells and emigration of leucocytes (probably through

FIG. 2.



Engraving of a growing new vessel in a granulating wound (× 450). In the middle of the illustration is seen a channel composed of flattened cells derived apparently from connective-tissue cells. Above and to the left the spindle-shaped cells and the large macrophages (or plasma cells, as they are sometimes called), each with a single nucleus, are well seen. A few leucocytes may also be seen. The method of formation of the bloodvessel from the advancing row of connective-tissue cells is well seen.

this softened cement substance) and effusion of serum, all this resulting from some injury or irritation to which the tissues are subjected, the various processes at this stage appearing to be associated with the checking or counteraction of the presence of irritant or foreign bodies. When these exudations have done their work and have localised the area of action of the irritant or injury, and have formed a sharp line of demarcation between the healthy and the abnormal tissues, they have no longer any function to perform; they in turn become foreign bodies, and as such must be removed. Acting as foreign bodies and along with the other irritants present, they induce proliferation of the fixed connective-tissue cells, a proliferative process which is not confined to the endothelial cells of the lymphatics, but is also participated in by the endothelial cells that form the walls of capillary vessels. It might at first sight appear that the accuracy of the observations as regards the proliferations of the endothelial cells of the capillaries can scarcely be relied upon, and that little corroborative evidence has yet been brought forward in support of such accuracy; but we have not far to seek for collateral evidence of a very important nature, though such evidence is not often quoted in this connexion.

It is a matter of common observation that in certain conditions of the lung and kidney where we have irritant material circulating in the lymphatics and setting up proliferative changes in the connective tissue, the more marked these changes are in the adventitia of the vessel—that is, in its connective tissue sheath,—the more likely are we to find proliferation of the cells of the intima, with in some cases a shooting of vessels into the new cellular mass. The processes in the outer and in the inner coat go on simultaneously, and we have endarteritis obliterans associated with connective-tissue proliferation around the vessels. Of course it will be objected that the irritant material acts on the intima and on the connective tissue from different points, and that when tissues are stimulated in this slow chronic fashion, they proliferate and give rise to the changes we have described. It must be pointed out, however, that the results are identically the same; in both we have a cellular connective tissue, and in both young bloodvessels are formed just as at the surface of a granulating wound, and the endothelial cells in the bloodvessels, whether large or small, react as do connective-tissue cells, whether these be in the adventitia of a vessel of considerable size or in the new granulation tissue surrounding the capillary vessels. In no case can any transition from a leucocyte to a connective-tissue cell be observed; the leucocytes are phagocytes and little else, though, as we shall find, they probably play a most important part in nutrition, a part which only in recent years has been assigned to them. The connective-tissue cells, on the other hand, have an all-important part to play in the building up of new tissues in addition to their functions of metabolism. It may be, of course, that this distinction into leucocytes and fixed connective-tissue cells is, after all, somewhat artificial, as the differences in character may be only temporary, and may be due merely to the different conditions under which they are compelled to exist and proliferate; but whether the distinction be artificial or not, there remains the fact that we have these marked differences, and that in any case it would require a considerable time for these various cells to become transformed one into the other. There can be no doubt, of course, that the connective-tissue cells under the stimulus of certain irritants proliferate rapidly, their usual appearance is somewhat departed from, and we have what Virchow would call a "metaplasia." Then, again, all that we know of the source of a true leucocyte would lead us to suppose that these in turn are derived by a process of proliferation from endothelial cells, very similar in structure to the large endothelial cells that we speak of as fixed connective-tissue cells, but the fact still remains that we have these important differences.

This brings me to an exceedingly interesting and suggestive line of thought that has been opened up by Ruffer[2] in his paper on the Phagocytic Action of the Lymphoid Cells of the Intestine, by Gulland[4] in his paper on the Development and Structure of the Tonsils, and by Stiles on the Structure of the Axillary Glands.[5] We have already seen that under ordinary conditions there is an accumulation of leucocytes and a proliferation of connective-tissue cells at any point where effete matter has to be removed or foreign matter got rid of. We also know that the development of an organ or part is always followed by the development of lymphatic glands along the line of lymphatics leading from it, a development that appears to be due to the necessity that there is for the destruction of an increased amount of effete matter. Even in these glands it will be found that the two kinds of cells—that is, those large branching cells lying on the reticulum and the smaller lymphoid cells found in such numbers in the free spaces—are essentially different, and may be compared to the two kinds of cells met with in the healing wound. Here each kind of cell has its own function; but so far as we can see under ordinary circumstances the lymphoid vessels are primarily concerned in the taking up and dispersion of the substances brought to the gland by the lymphatic channels. It would appear that they do the rough work of "secondary" digestion, and that through their assistance the larger cells are enabled to go about their work leisurely and to do it efficiently. This would bring the development of the lymphatic gland into much the same category of process as those met with in a healing wound, the only difference being that in the one case we have an irritant that is applied over a considerable area and indiscriminately to all the tissues in that area; whilst in the other we have the irritant brought up by a distinct channel, by the walls of which its action is confined strictly to definite areas and tissues—i.e., those to which it is distributed

[2] Journal of Microscopical Science, Jan. 1890, and British Medical Journal, Aug. 30th, 1890.
[4] Reports from the Laboratory of the Royal College of Physicians of Edinburgh, vol. iii., 1891.
[5] Demonstrated before the Edinburgh Medico-Chirurgical Society, Dec. 1891.

from this channel. If now we look upon this channel as breaking up into a capillary network—the capillaries of which are the spaces between connective-tissue or fat cells,—and suppose that it acts as an irritant, as in a healing wound, the development of a lymphatic gland, with its lymph follicles, its delicate reticulum, its slowly proliferating endothelial cells and its accumulation of lymphoid cells is comparatively easily explained. The enlargement of this gland under increased irritation, the enormous proliferation of both kinds of cells in such conditions as typhoid or septic irritation, and the like, and the actual suppuration that occurs when these processes are very intense are readily understood. The more we think over the matter the more are we struck by the similarity of the processes above-mentioned, and the more does it appear necessary that the development of the lymphatic gland should be studied in order that its importance in the economy in the localisation of disease may be appreciated. The time has now gone by for connective tissues to be looked upon merely as padding and support, or even as tissue in which fat may be accumulated and leucocytes formed. These connective-tissue cells along with the leucocytes play a far more important *rôle*. Various metabolic products have been found in them, and the liver is gradually being ousted from its high place as the great metaboliser of the body, and its place is being taken, in part at any rate, by the connective-tissue cells and leucocytes; whilst it is further acknowledged that even where the liver is allowed to retain any metabolic function it is often merely to complete work that has already been commenced by the tissues of which we have spoken, and that so far its functions are excretory rather than secretory. In making such statements as these one must be extremely guarded lest functions of which hitherto we have had too exalted an opinion should now have too little importance attached to them. At present, however, there is little enough danger of the mesoblastic tissues being promoted to too prominent a position, especially if it is to be at the expense of the liver. Certainly the connective-tissue cells and leucocytes have much more in common with those of the liver than is often admitted; whilst the greater the degeneration of liver cells in any disease, the nearer in most cases does it approximate in its functions the active connective-tissue cells. In both kinds of cell we find that fat may be stored up, such fat apparently in most cases being derived from the splitting up of proteids or other substances containing the fat molecule that are brought from without. We have the protoplasm of the liver cell remaining almost intact, just as does the protoplasm of the connective-tissue cell. It, along with the nucleus, which retains the greater part of its activity, is simply pushed aside, and on the absorption of the fat resumes all its previous activity. The liver cells, too, have the power of taking up pigment derived from the blood, and in normal conditions of breaking it up rapidly, and probably of excreting the products into the bile-ducts in the form of bile-pigment. Where, however, as in chronic venous congestion, their nutrition is interfered with we find not only breaking down of the liver cells due to the internal metabolism or the conversion of their own protoplasm into fat by the breaking down of its own proteid substance; in such cases we also find that pigment accumulates in these cells, pigment that is not readily got rid of, and which remains in them just as pigment remains in degenerating connective-tissue cells or leucocytes.

(To be concluded.)

CHRONIC TRAUMATIC ARTHRITIS.

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MY object in writing this paper is to make another attempt to separate from the several groups of conditions comprised by the terms "rheumatoid arthritis," "rheumatic gout," "osteo-arthritis," "arthritis deformans," &c. one which is very definite in its history, clinical symptoms, and pathology. As far as I know, no author has recognised this class as a separate one, while pathologists do not pretend to make any such distinction. As its causation is entirely mechanical, I would suggest for it the term "traumatic arthritis," to which I would add "chronic," for the reason that the condition develops slowly, and when once produced it continues to progress during the lifetime of the patient. Some objection may be urged against the universal appropriateness of this term, since the condition to which I wish again to call attention does not always arise from the severe contusion of the joint as the result of a *single* injury; but it may, and frequently does, come about in consequence of the excessive use of a joint, or of any alteration in its normal anatomy and physiology, by means of which pressure is transmitted habitually from one bone to another in an abnormal manner; or it may result from a joint being called upon to sustain and transmit an amount of force greater than the particular human organism was evolved to support. In a paper in the Transactions of the Pathological Society, 1886, entitled the "Causation and Pathology of Rheumatoid Arthritis and of Senile Changes," I showed that the very large proportion of the pathological changes which are regarded as evidence of the so-called disease "rheumatoid arthritis" depend for their production upon factors which are simply mechanical. The careful clinical study of the conditions comprised under the term "rheumatoid arthritis" &c. by recent observers[1] has resulted in the differentiation of two distinct groups of joint diseases—one, namely, rheumatoid arthritis, in whose causation rheumatism forms no part, and whose symptoms are very complicated and by no means limited to the changes in the joints, and the other rheumatic arthritis which results solely from rheumatism. To these two groups I would then add a third—chronic traumatic arthritis,—and I would urge that while it forms a not inconsiderable share of what is clinically regarded as rheumatoid arthritis &c., it provides almost solely all the conditions which in our museums are represented as specimens of that disease.

I find that in the dead body the following changes are almost universally supposed to be characteristic of that vague condition rheumatoid arthritis, the term being here used in its older and more comprehensive acceptation, namely:—1. Removal of articular or inter-articular cartilage. 2. More or less destruction and eburnation of opposing surfaces of bone deprived of their articular cartilage. 3. The formation of cartilage, or more usually of bone, upon the margins of the articular surfaces altering their form and increasing their area. These growths may occasionally extend into the ligaments or less frequently develop primarily in them. To these changes the terms "osteo-phytic growth," "lipping," &c., are applied. 4. Hypertrophy of the synovial membrane so as to form more or less abundant masses or fringes consisting of branched pedunculated processes, which in some cases contain much fat, and in others small masses of cartilage or bone. These occupy the varying intervals between the altered articular surfaces, and often secrete an abnormally large quantity of synovial fluid. This may be so abundant as to distend the capsule and to cause much relaxation of ligaments. It is highly probable that these or similar changes may be found in patients who have been affected for many years by either of the groups of rheumatoid or rheumatic arthritis. They must come but rarely under the observation of the pathologist, and they are represented hardly if at all on the shelves of our museums.

I will now proceed to illustrate briefly the several conditions to which I would apply the term "chronic traumatic arthritis."

A man, past middle age, falls heavily upon his side, striking the great trochanter with much force. In consequence of this injury he experiences much local pain in the hip-joint, which is aggravated by movement of it. If the legs be measured they are found to be of equal length. The patient finds that after the injury his leg is not so reliable as it was before, that the movement of complete flexion of the hip-joint is accompanied with discomfort at first, and later with pain, so much so that any movement of the joint is avoided as much as possible. He also suffers discomfort or pain in the joint in damp weather, or during the cold east winds. I believe that it is the similarity of this pain to that felt by rheumatic patients that has led clinical observers to include this traumatic condition among those classified under the old headings of "rheumatoid arthritis" &c. I need hardly point out that after any injury to a bone, such as fracture &c., the sufferer often complains of the same kind of pain under the same atmospheric conditions. After a time the patient notices that the damaged

[1] Osteo-arthritis: Kent Spender. Rheumatic Diseases (so-called): Hugh Lane and Griffiths

leg has become shorter than its fellow, and actual measurement shows that this is the case. This shortening increases during the life-time of the patient if he continues to throw his weight upon the articulation. The joint becomes progressively less secure, until at length the weight of the body cannot be supported by it at all in many cases. Soon after the receipt of the injury grating can be felt on flexing or extending the joint, and this sensation becomes more marked as time goes on. If such a joint be examined after death, the head of the femur and the acetabulum are found to be completely altered in form and character. The opposing surfaces of the innominate bone and femur are rubbed down, sclerosed, and eburnated, while around these eburnated surfaces there is an abundant deposit of more or less dense bone, whose obvious function is to compensate for the altering direction in which force is transmitted through the joint and to render it as secure as possible under the circumstances. The capsule has become thin and lax, and has ceased to perform most of its normal functions. The synovial membrane is bulky in the joint and contains an abnormal amount of synovia. The causation of the several changes here described is quite obvious. The opposing surfaces of articular cartilage have been bruised sufficiently to interfere with their vitality, and there being no means of replacing the damaged tissue it is removed. The habitual transmission of force through the damaged joint results in the progressive destruction of the remainder of the articular cartilage, in the exposure, eburnation, and the progressive gradual destruction of the subjacent articular lamella of bone. These changes are followed by the others already described, the factors determining their evolution being solely mechanical. Is there any argument in favour of applying to this condition such a term as "rheumatoid arthritis" or any of its synonyms? A change, similar in character, though slighter than that just described, which develops to a varying degree in the hip-joint of labourers who are employed in carrying heavy loads, was misconstrued by anatomists, and led them to suppose that in old age the neck of the femur yielded, and that the head occupied a lower level than in the adult in consequence. In the paper already referred to I pointed out how this fallacy arose, and I have since been pleased to see that so keen an anatomist as Professor Humphry has in a recent paper denied that any such change takes place in the obliquity of the neck of the femur in old age.

The following serves as another instance of chronic traumatic arthritis. A man falls heavily on the outer surface of his shoulder. He suffers from much pain at the time, and he can neither bear the shoulder-joint to be moved nor can he perform any active movement himself, on account of the pain associated with it. If the shoulder be examined no fracture can be made out, and the outlines of the humerus and of the glenoid cavity are normal. The symptoms progress as in the case of the hip. The shoulder becoming flattened, the patient is unable to abduct the humerus, and the movements of the shoulder joint become limited finally to a moderate amount of flexion and extension. On examining the joint after death the opposing surfaces of the head of the humerus and of the glenoid cavity are deprived of cartilage, the articular layer of bone is rubbed down and eburnated, the surface of the humerus is rendered flat, or but slightly convex, being much increased in breadth by the deposit of bone upon its margin. The articular surface of the scapula has undergone similar changes. The synovial membrane is bulky and the muscles of the shoulder, especially the abductor muscles, are much wasted. Here, again, the causation is quite obvious. Force is applied to the outer surface of the humerus in such a direction that its articular surface is driven forcibly against that of the scapula, and in a direction at right angles to the surface of the latter. Changes ensue in the manner already described in the hip.

I would instance still one more example in the same joint. A man receives a heavy blow or pitches heavily on the point of the shoulder, breaking his acromion process, whose loose fragment is driven forcibly downwards upon the upper surface of the humerus, bruising its articular surface severely, together with the intervening capsule and tendon of the supra-spinatus. Degenerative changes ensue in the contused portion of the articular cartilage, and gradually extend to more or less of the remainder of the cartilage of the head of the humerus and to that of the glenoid cavity. The upper portion of the capsule, with more or less of the tendon of the supra-spinatus, is gradually destroyed, and the humerus comes sooner or later into direct contact with the movable fragment of the acromion. The constant movement of these bones upon one another results in further changes in both, the acromial portion becoming excavated, eburnated, and lipped. The intra-capsular portion of the biceps tendons is destroyed, the long head acquiring an attachment to the altered great tuberosity. Other changes develop at the same time in the synovial membrane. I would call particular attention to this last injury, as it bears in an important manner on the elucidation of the causation and pathology of chronic traumatic arthritis. I showed[2] some time ago that fracture of the acromion is of very common occurrence, and that the supposed rarity of the fracture depended upon a want of skill in recognising its existence. Since that paper I have been able to verify this statement most fully, both in the accident department, where the recent fractures were observed, and in the out-patient department, where the condition of non-union which almost always results was seen. This non-union is due to the fact that unless the accident is diagnosed, which it very rarely is, or unless it be accompanied by some more severe injury, as fracture of the upper end of the humerus, the shoulder is not kept at rest for a sufficient time to allow of the fracture of the acromion uniting by bone, and as a consequence a false joint forms. When the blow which produced the fracture was sufficiently severe to contuse the articular cartilage of the head of the humerus and the intervening soft parts, the changes I have just described follow.

Anatomists are largely responsible for the non-recognition of these fractures, since they have chosen to regard the resulting ununited conditions as examples of non-union of an epiphysis, and, so far as I can see, upon no reliable evidence whatever. Some surgeons have readily accepted the statements of the anatomists apparently without investigating them. They have, however, observed the frequent association of this so-called ununited epiphysis with the presence of so-called rheumatoid changes in the shoulder-joint, and have explained the cause of thei association in various ways. One has gone so far as to assert that in cases of chronic rheumatoid arthritis of the shoulder-joint a disunion of the acromial epiphysis from the rest of the bone takes place. Such a statement hardly calls for criticism, and I only mention it to indicate the frequency with which those changes which the pathologist regards as characteristic of the disease, rheumatoid arthritis of the shoulder-joint, are found associated with ununited fracture of the acromion. Can anything be more obvious and simple than the mode of development of an ununited fracture of this process of bone, if one considers for one moment its position and muscular attachments, together with the difficulty of retaining the broken fragment at rest for any length of time, even if the fracture be recognised? The only two examples of bony union which I have observed followed a fracture of the acromion, which was accompanied by a severe comminuted fracture of the upper end of the humerus. Owing to the pain resulting from the presence of the latter fracture the shoulder was kept at rest sufficiently to allow of bony union. Though I might multiply such instances indefinitely, I think I have said enough to show that a severe injury to a joint is liable to be followed by the development of such pathological conditions as we are accustomed to regard as evidence of the presence of rheumatoid arthritis.

I will now allude but very briefly to the remarkable changes which develop in the joints of men or beasts of burden accustomed to follow some laborious occupation for many years, since I have described them very fully in preceding papers. They were all regarded as examples of rheumatoid arthritis on the post-mortem table, and also not uncommonly during lifetime. They consist in the removal of articular cartilage, the sclerosing, eburnation of the exposed bones, the alteration in the forms of the articular surfaces—sometimes by considerable excavation of bone, sometimes by the abundant deposit of bone upon the margins of the articular surfaces,—by the formation of masses of bone upon the floor of cavities—such as the olecranon and coronoid depressions,—the removal of fibro-cartilage from the sacro-iliac and vertebral joints, the formation of large prominences of bone locking these joints, the fusion of opposing surfaces of bone, &c. Again, precisely similar changes take

[2] The Pathology of Changes produced by Pressure in the Bony Skeleton of the Trunk and Shoulder Girdle: Guy's Hospital Report, 1885, 1886.

place in joints if the direction of force transmitted through them varies from the normal and the articulation is made to perform a function for which it was not originally fitted. I refer to changes occurring in the joints in knock-knee, bow-legs, lateral curvature, in cases of shortening of one leg by fracture or disease, &c. I am well aware that both rheumatoid and rheumatic arthritis, and especially the former, are very prone to affect a joint damaged in its anatomical detail, and consequently in its physiology, by occupation or injury, and this has been pointed out very clearly by Dr. Hensley of Bath, and it may in some few cases be difficult to state whether the condition is one whose causation is solely traumatic, or whether added to this we have in addition a factor whose mode of action is much more complex; yet I would assert that in the very large majority of instances of the condition which I have called chronic traumatic arthritis there is no difficulty in recognising it either clinically or in the dead body, and that therefore we should no longer include this definite group under a series of names which only serve as a cloak to ignorance, but give it a definite and explanatory title.

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OBSERVATIONS ON CERTAIN DISPUTED POINTS IN RENAL PATHOLOGY.[1]

BY A. G. AULD, M.D.

FIRST I shall describe what seems to be the true interpretation of the morbid changes found in the pia mater and in the skin, then certain lesions in the Malpighian bodies, and lastly I shall deal with some considerations based on anatomical data respecting the cause of the polyuria which is so constantly observed in the contracting form of Bright's kidney. I have been enabled, through the courtesy of Dr. Coats, to examine the pia mater of all brains examined in the Western Infirmary during a period of fifteen months. In each case the membrane was carefully hardened in Müller's fluid and alcohol, then dehydrated, and soaked for some days in Hamilton's freezing fluid A. From the resulting sections some valuable facts were obtained; and, in particular, I have been enabled to make out by means of high powers what seems to be the true nature of the hyaline-fibroid thickening of Gull and Sutton. As is well known, these authors, in their celebrated papers, contended that in Bright's disease the bloodvessels throughout the body, and especially those of the pia mater, had their outer coats thickened by the deposition therein of a hyaline-fibroid material, probably derived from the blood. The muscular coat in such vessels they conceived to be atrophied, while the inner coat frequently, but by no means invariably, partook of hyperplastic change. This theory received a most damaging criticism from Johnson, who strongly maintained the truly hypertrophic condition of the muscular layer, while the so-called "hyaline fibroid" he alleged to be a delusive result of reagents, such as glycerine and acidulated mounting fluids. In 1873 Grainger Stewart pointed out that, while mounting media undoubtedly had some influence in producing the hyaline appearance, not a few cases exhibited a true fibrous thickening. Dickinson subsequently lent his adherence to this view, but the precise nature of the change is still the theme of debate. According to my observations, it may be stated generally that in Bright's disease all the coats are thickened. In the vast majority of cases the inner coat shows endarteritis. This change seems very constant in fatty kidneys in adults, though it is occasionally absent in contracting kidney. As regards the muscular coat, there can be no room for doubt that Johnson's contention is the correct one. Further, it was maintained by this eminent observer that a longitudinal layer of muscle-cells could be observed alongside the hypertrophied circular layer in some of these cases. It was asserted by Dr. Bryan Waller that this was an impossibility, and that Dr. Johnson mistook the cellular strata of the thickened inner coat for a layer of muscle cells. I think, however, that on looking at one of the specimens we will be satisfied that to the inside of the hypertrophied circular coat longitudinal muscular fibres exist which can in no way be confounded with the proximate layers of the thickened intima. There are, however, some cases in which the muscular hypertrophy is far from being a marked feature, and when the disease is far advanced degenerative changes of an aggressive character attack the hypertrophied fibres. In the case of the outer coat it is plainly shown from these preparations that it is thickened, and the question is, What is the nature of this thickening? Now, after eliminating the possibility of amyloid disease by careful staining, I have invariably made out by means of very high powers the existence of branched corpuscles, with dividing nuclei, either embedded in or lying alongside the hyaline-fibroid formation. It is clear that this formation owes its origin to a slowly progressing inflammatory new formation of connective tissue, and that the effect of reagents is, after all, but unimportant. Not only so, but this corpuscular activity is manifest throughout the connective tissue of the pia mater generally, leading to a more or less general thickening.

As regards the *skin*, the sections show that the muscular coats of the arterioles are much thickened. This is generally to be observed. In one case, in which the œdema was a very marked feature, the derma is unduly cellular; clusters of leucocytes seem to be scattered throughout its substance. It seems as though some inflammatory process were at work, and hence we find here considerable support to the view of Cohnheim as to the cause of this form of œdema.

With regard to the lesions of the kidney itself in chronic Bright's disease, examination of a large number of kidneys has led me to recognise two great divisions. In one, the lesions of the glomeruli and of Bowman's capsule are very marked, and overshadow the other lesions; in the other class the reverse holds good.[2] Greenfield recognises the lesions of the capsule as pericapsulitis or cellular infiltration and tissue-formation occurring chiefly outside this structure, as hyaline thickening of the capsule itself, and as endo-capsulitis or the formation of concentric laminæ of cells and tissue inside the capsule between it and the glomerular tuft. Greenfield regards the cells lining the capsule to be capable of originating this formation. Now, in acute glomerulitis it is undoubted that layers of epithelial cells are formed inside the capsule, derived from germination of its lining epithelium. But in chronic glomerulitis this is no longer seen. Instead we have the following changes:—1. The epithelial cells covering the glomeruli swell and assume a peg-top or columnar shape (well seen in the section placed under the microscope); they then fall into the periglomerular space, and assume a rounded form. 2. A similar desquamation of the cells lining the capsule occurs, but without the intervention of the columnar shape. 3. The connective tissue nuclei, and likewise the nuclei of the capillary walls of the Malpighian tufts, germinate, multiply, and give rise to a new growth of tissue between the capsule and the tuft, the capillaries undergoing hyaline thickening the while. In one specimen we see a band of new tissue stretching across the peri-glomerular space to which numerous epithelial cells have attached themselves—a phenomenon which has been questioned by Ziegler and some others. 4. Not infrequently the capsule itself becomes slit up into several layers, giving the appearance of two or more capsules for part of its circumference. This dissecting process is accomplished by cells from the surrounding connective tissue. In other and more advanced cases the capsule appears striated and concentrically thickened, and blends with the sclerosed glomerular tuft. It is difficult to see why these lesions should occur in some cases and not in others; they are by no means confined to scarlatinal cases, and, moreover, in post-scarlatinal nephritis which has assumed a chronic form they are occasionally absent.

Lastly, I propose to advance a few original considerations respecting the cause of the polyuria which is such a characteristic symptom of contracting kidney—considerations based, I may say, almost entirely on the histological appearances which this kidney presents. It is the universal custom to ascribe the excess of urine to one or other, or else a combination, of the following factors. Increase of the blood pressure generally; increase of the blood pressure locally in the glomeruli, arising from obliteration of capillary areas; inability of the tubular epithelium to absorb the water passing from the glomeruli; and increased permeability of

[1] A paper delivered, with microscopic demonstrations, before the Glasgow Pathological and Clinical Society, Jan. 11th, 1892.

[2] I purposely omit here particular reference to changes in the parenchyma.

the glomerular wall. On each and all of these alleged causes the facts of pathological histology seem to me to cast grave doubt. As regards the third of these—the inability of the glandular epithelium to absorb the water,—I do not believe that such an absorption normally occurs; for if it did, we should have the extraordinary phenomenon of a cell simultaneously secreting and absorbing a waste product. Many arguments could be adduced against this theory, but it does not vitally concern my position. Consider first the normal secretion of urine. It is accomplished by two great systems, from two great sources. One of these is the glomerular system, which secretes the watery part of the urine *plus* the salts; the other is the tubular system, which secretes a fluid rich in urea and extractives. This is conclusively proved by the experiments of Nussbaum on amphibians, and by the experiments of Heidenhain. With respect to the glomerular system, the view of Heidenhain seems unquestionably the correct one, that the Malpighian body is in reality a secreting gland and not a mere filtrating apparatus, otherwise it is inconceivable how, after section of the medulla, the injection of sodium acetate into the blood is accompanied by a copious secretion of urine which is of course unattended by any rise in the blood pressure. And, indeed, in the case of granular kidney, Broadbent has given cases in which the polyuria was marked without any rise in the arterial tension. The epithelium of the tuft is therefore pre-eminently a water-secreting epithelium. Now, what is observed on examining microscopically sections of granular kidneys? It is found that the glomeruli are agglomerated together in more or less wedge-shaped areas of sclerotic tissue, the intervening spaces being occupied by dilated tubules whose basement membrane has escaped much alteration, but whose vascular supply is abnormally abundant. Now, in the majority of cases, 80 per cent. of the Malpighian corpuscles in these sclerosed areas are totally functionless. How, on any pressure theory, can the few remaining tufts manage to secrete the large quantity of water which flows from the kidney, especially when, in addition, it is considered that the tubules from the patent glomeruli are not infrequently snared by the cirrhotic tissue? It seems to me that this view must be abandoned, and the seat of the secretion of water sought for elsewhere. This I believe to be found in a peculiar modification or transformation of the tubular epithelium in the areas which have escaped destruction. It is a remarkable fact, acknowledged by all observers, that the normal glandular epithelium in this situation becomes converted in granular kidney into a thin, flat epithelium—an epithelium, in fact, resembling that normally lining the glomerular taft. This may be readily seen in the sections. Is there, therefore, any reason to deny that this peculiar modification of the epithelium is but a compensatory process of nature whereby the elimination of water is effected? Further, these epithelial cells have bright-staining nuclei which proves them to be in an active state. If it be not conceded that this epithelium actually subserves a modified function—that of secreting a much larger percentage of water than normally,—I think it at any rate cannot be denied that it more readily permits a passage outwards of water from the underlying bloodvessels, and that it ceases to become a "water-inhibiting" epithelium, as in the normal gland.

This view is supported by the anatomical appearances, by the constant diminution of the urine in cases where the epithelium is gravely injured, and by many of the kindred facts of pathology.

Glasgow.

CONGENITAL ANOMALIES OF THE RETINAL VEINS.

BY SYDNEY STEPHENSON, M.B., F.R.C.S. EDIN.

IT is impossible, I suppose, to over-estimate the importance of recognising congenital variations of normal conditions, and nowhere throughout the body does this recognition assume greater clinical consequence than in the eye. Loring[1] has well said, "It is the same old story of the musician and his scales. Five-sixths of the art of ophthalmoscopy are contained in a knowledge of the normal eye; the rest is a series of representations which can be read almost at sight." In the eye, as in other parts of the body, that arrangement of the vessels which obtains in the majority of cases is regarded as representing the normal condition of affairs. It may be well, therefore, to preface this account of certain anomalous dispositions of the retinal veins by a short description of the usual mode of distribution of these vessels. The primary division of the central vein of the retina may take place either in the retro-ocular portion of the optic nerve, or (less frequently perhaps) upon the surface of the disc itself. Either mode of division results in the formation of a superior and an inferior primary vein. These veins again divide (usually upon the disc), and their branches undergo division and subdivision in a dichotomous fashion; but it is commonly held that no inosculation takes place between the various branches. The whole process of repeated dichotomous division gives rise to the picture of an arborescent system of non-anastomosing veins, which, springing from the optic disc as a centre, ramify in the innermost part of the nervous tunic of the eye. The smaller variations observed in this general plan of distribution are innumerable: no two eyes ever present exactly the same arrangement of the retinal vessels. (The veins, it will be noticed, have been described as pursuing a course contrary to that taken by the blood current; this has been done simply for the sake of lucidity.) In accordance with the fact that, throughout the body generally, the arrangement of veins appears to be less stable and uniform, less fixed, so to speak, than that of the arterial system, one meets with anomalies of the retinal veins more frequently than of the retinal arteries. I have, for instance, seen eight examples of an anomalous disposition of the retinal veins during the past eighteen months; while during the same period I have failed to meet with a single anomalous retinal artery.

Turning now to the literature of the subject, one finds that the number of recorded cases is not great. In the *Medical News* (Philadelphia) of Sept. 11th, 1886, Dr. B. Alex. Randall published a case in which the central vein was connected with an aberrant vein by means of a cross-branch; the communication took place across the optic disc. The same author, moreover, recorded, in the Transactions of the American Ophthalmological Society for 1888, four new cases, and incidentally he mentioned the existence of a sixth case which he had recently encountered. Dr. Randall's communications are illustrated by drawings of the conditions he describes. In Vol. IX. of the Transactions of the Ophthalmological Society of the United Kingdom, Mr. Adams Frost, under the title of "Abnormal Course of a Retinal Vein," described a venous abnormality, which he had met with in the right eye of a young woman; while in Vol. X. of the same publication an account of "an abnormal retinal vein" is given by Mr. Louis Werner. Both these authors give pictures illustrative of their respective cases. Under the somewhat ill-conceived title of "Bifurcating Retinal Veins," I described, in Vol. XI. of the Transactions of the Ophthalmological Society, two examples of the condition in question. The patients were shown at a meeting of the Society; and illustrations of the anomalies will be found in the Transactions.

It appears, then, from the above catalogue that ten examples of the condition discussed have been placed on record. Accompanying this communication will be found sketches of six anomalous retinal veins which I have met with lately. In this number I do not, of course, include those cases mentioned above as having been shown by me to the Ophthalmological Society; for that matter, examples of arrangements similar to those then exhibited have been met with since, and are included among the sketches now presented.

In connexion with this matter of anomalous veins certain questions naturally present themselves. What forms do these anomalies assume? Are the arrangements seen reducible to any sort of order; or are they, on the other hand, wholly irregular? Judging from my own cases and the cases placed on record by others, I should say that the anomalous arrangements fall into one or other of three classes, with this reservation, however: that the classification here outlined must, in the absence of more extended observations, be regarded as more or less provisional in its nature. The first class includes cases in which two of the primary veins are united by

[1] Text-book of Ophthalmoscopy.

a cross-branch, or cases—and this obviously is to all intents and purposes the same thing—in which a branch connects a central with an aberrant vein. The first of these conditions is depicted in plates Nos. 4 and 5; while the second is shown in plate No. 3. Frost's case, alluded to above, belongs, I think, to the former division; and Nos. 4 and 5 in Randall's series afford good examples of the latter condition. The second class comprises cases in which a vein bifurcates while on its way to the centre of the disc. As shown in plate No. 2, the bifurcation may take place in close proximity to the axis of the papilla; or it may,

FIG. 1.

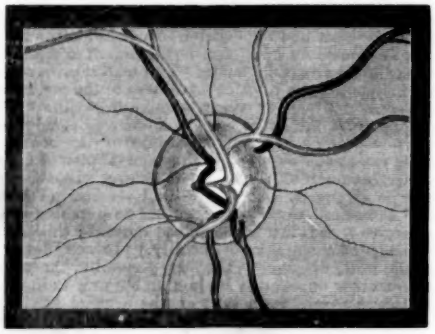


FIG. 2.

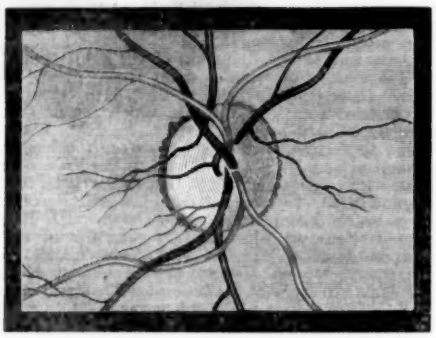
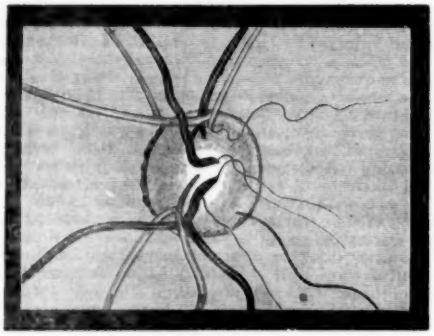


FIG. 3.



on the other hand, as shown in plate No. 1, occur when the vein is still at a considerable distance from that point. As belonging to the second of these varieties I would class Randall's cases Nos. 1 and 2; while my own cases, which were shown at the Ophthalmological Society, afford examples of both the varieties described. The third class comprehends those cases in which a venous anastomosis is formed upon the disc itself. This, it appears, may be constituted in one of two ways. In the first case, by a vein dividing at the margin of the papilla into two branches, which, after forming a considerable circle, unite to enter the disc as a single trunk. Some or all of the veins may unite with this venous circle. In the second case one sees upon the optic disc a horseshoe-shaped vein, which, entering the papilla by its upper and lower extremity, receives the other retinal veins at various points in its course. I am not in a position to adduce an example of the first variety; Randall's plate No. 3 is, however, a case in point. The picture No. 6 will render clear the nature of the second variety, and Werner's case, also, appears to come within this category.

FIG. 4.

FIG. 5.

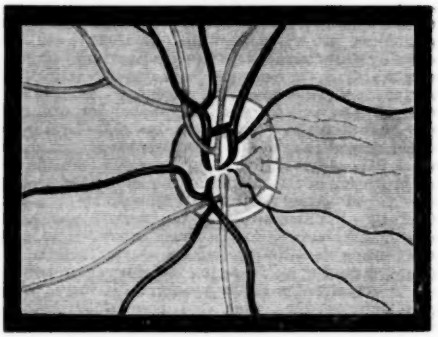
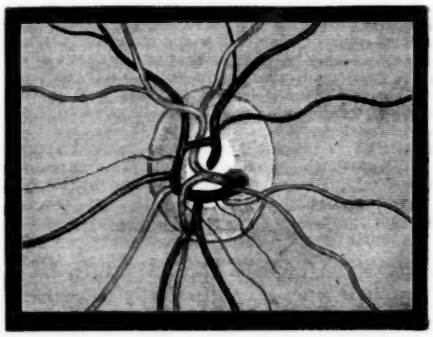


FIG. 6.



These anomalous venous arrangements do not appear to be associated with systemic abnormalities—at least, in no case has any such conjunction been noted. Furthermore, it is worthy of mention that in all the recorded cases the anomaly has been limited to one eye. Whether the explanation of these anomalies be connected with the repetition of conditions natural in the eyes of some of the lower animals, or whether, as seems perhaps more probable, the persistence of fœtal conditions has more to do with the matter, I am

unable to say. One knows, however, that many of the variations from the normal observed in the bloodvessels generally receive their explanation in some such way, and there appears to be no valid reason why the vessels of the eye should furnish any exception to the rule. Be this as it may, it becomes of some practical importance to know that anomalies of a purely congenital nature are not very uncommon in the veins of the human retina. Out of every 1000 eyes examined I estimate, indeed, that at least three will show an anomalous arrangement of the retinal veins.

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CASE OF HERPES OF THE LARYNX.

BY R. E SCHOLEFIELD, M.A., M.B.,
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THE following case, which came under my notice during my admission period at St. Bartholomew's Hospital, from the curious character of the symptoms presented and the difficulty of finding an explanation for the same, may be of interest to the readers of THE LANCET, though I venture to think the case is anomalous.

S. A——, forty-one years of age, packing-case maker, came, or rather was brought, to the hospital by a fellow-workman on Nov. 18th last, suffering from a curious combination of dyspnœa, difficulty in swallowing, and nervous excitement. The history of his condition was that he was in good health up to about a fortnight previously, when he had a slight bilious attack with giddiness, which, however, did not prevent him from following his occupation. A similar attack occurred again a few days before admission.

On Nov. 17th the patient first felt a "tightness" in his throat, with some hoarseness and cough; he continued at work, however, till the 18th, when in the afternoon his throat became so much worse that he had to be brought to the hospital. He complained of intense pain on swallowing, with a difficulty in getting his breath, and a feeling of tightness about the throat. The patient presented a most curious appearance: he sat with a face expressing the utmost anxiety, his eyes seeming to protrude, swimming with tears, which ran down his face, his mouth was open and the saliva ran in large quantities over his lip down into his beard. The alæ nasi and lips appeared red and slightly swollen. The dyspnœa was not very marked, but his breath was drawn with fear and trembling. The most remarkable feature of the case, however, was that when he attempted to swallow, not only his face but his whole body writhed with agony, almost resembling a convulsion, and he had evidently the greatest dread of making the attempt. He spoke in a hoarse whisper, and not more than was absolutely necessary; but on pressing him to do so I found that phonation was not only possible, but was not even distinctly impaired. He complained of great pain on the left side of the neck, and pressure anywhere between the left side of the larynx and the ear was not only extremely painful, but also caused him to roll about in the most extraordinary contortions. One's first thought was of hydrophobia, but no evidence could be obtained in the least supporting this view. The man was certainly not in liquor, as his habits were most temperate, and his companions vouched for the almost sudden onset of the condition while at work. Family and personal history threw no light on the subject. He was temperate, married, family healthy, and had never had syphilis. External examination was equally negative, except that the glands on the left side of the neck were slightly enlarged, and the tenderness over them was extreme. On examining the mouth, the fauces were slightly reddened and the uvula somewhat œdematous, but there was no great tenderness and no sign of membrane or ulceration to be seen; clear and glassy mucus was, however, standing everywhere in beads, and pouring rapidly from the naso-pharynx. His temperature was 103·4°; pulse 116, weak; respiration 25, drawn apparently rather with a sense of pain than with a desire for air.

With some difficulty I was able, after the use of cocaine to the fauces, to make a perfectly satisfactory laryngoscopic examination, which disclosed the following. The cords and ventricular bands were perfectly normal, as also was the right arytenoid and aryteno-epiglottic fold. The left, however, was redder than natural, and presented a mass about the size and shape of three peas more or less fused together, and capable of being moved over with a probe either to the laryngeal or œsophageal side of the ary-epiglottic fold, to the edge of which they were attached. The surface was redder than natural, quite smooth, and glistening like that of a polyp or a polypoid degeneration of the mucous membrane, for which I at first took them. Posterior rhinoscopy revealed nothing further. From their position and displaceability they were, granting their tenderness, capable of creating the greatest trouble either in phonation or in swallowing, as, when the epiglottis was depressed in the latter case, they were pressed into the pharynx, while in the former they somewhat overhung the orifice of the larynx, the entrance or exit of air through which caused them to vibrate enough to produce pain. Of their real nature I had then no idea.

He was admitted, and an ether draught administered, with cold compresses to the neck During the night he was most restless, taking only a little milk, and that with great pain and difficulty, expectorating about one pint of thin mucus, which was free from odour.—Nov. 19th: Condition slightly improved. Temperature 99·3°. Voice more natural; still great difficulty in swallowing. Urine: sp. gr. 1028; no albumen or sugar. No signs of disease in chest or lungs. The laryngoscope showed the tumour—if it may be called such—about the same, except that it was of a more milky colour, and there was more general swelling of the arytenoid, the right being also somewhat enlarged.—20th: Condition much improved in all respects; though still much pain on swallowing, there are none of the nervous symptoms with it. Temperature 98·6°. The condition now is that of a small bulla, filled apparently with pus, seated on the summit of the enlarged and swollen arytenoid. A patch of herpes was now observable, beginning about the left nostril and upper lip.—21st: Condition still improving. Temperature subnormal now. The bulla has now disappeared, and its place is occupied by a white patch of macerated epithelium, which could not be removed with a probe. Arytenoid not so much swollen. Herpes on lip and alæ nasi more extensive, and spreading to the other side. During the next few days he improved much in general health; pain on swallowing gradually disappeared, as also did the white patch and the swelling on the arytenoid. The voice became quite normal. The herpes on the lips and alæ nasi went through the ordinary stages of that eruption. It was rather extensive, passing up a little into the nostril. On Dec. 3rd the man was discharged with the herpes healed and the larynx normal.

It needs only to be remarked that I regard the case as one of buccal herpes, peculiar chiefly in the seat of the first vesicles, which were what I took for a polypoid growth; their course, however, through the milky to the purulent stage, bursting and then leaving a base which, becoming macerated by the saliva, looked like a white patch, points to this explanation. The pain in the neck, most marked at the onset, subsiding earlier than the eruption, the salivation and the rapid fall of the initial temperature, all confirm this view. I have since seen a case of herpes of the face and soft palate in which, though great pain was absent, the temperature and constitutional disturbance ran a similar course, being 103° when first seen, falling to normal on the third day, when the eruption showed itself. I hope that the case may not be without interest to the profession. It was certainly, to begin with, most puzzling; for though herpes of the palate, tongue, and cheeks is, I believe, not very rare, I can find no reference in the text-books to its attacking the larynx. I must, in conclusion, thank Mr. Howard Marsh for his kind permission to publish the case, which was under his care.

OCCLUDED OS AT FULL TERM.

BY L. NASH, L.R.C.P. & S.ED.

I WAS much interested in reading in a recent number of THE LANCET of a case of occluded os at full term. As so few instances have been recorded, I think it may be worth while giving brief notes of two such cases occurring in my private practice whilst I was in Sindh.

CASE 1.—In May, 1890, I was called to a multiparous

Hindu woman, who had been in labour about two days. At the end of that time the native midwife gave it as her opinion that the woman would never be delivered, and left her. When I arrived the patient was having pains. On examining, my finger met a smooth elastic wall, with no trace of cervix or os. It was puzzling; but after some time, carefully feeling round, I detected a slight dimple where I should expect the os to be. The pains occurred at intervals, but, beyond stretching the uterine wall, did nothing to dilate the closed os. The head was not fixed. Between the pains I gently scratched with my nail, and the tissue yielded with some very slight bleeding until I encountered the membranes, which were adherent round the os. These I cleared, and they began dilating, but the process was slow, partly because the parts were rigid with what felt like cicatricial tissue and also because the pains were becoming feebler. When the head had fixed I ruptured to relieve the uterus and assisted dilatation with my fingers, and finally put on forceps, delivering a live child, who, however, required resuscitation. The patient declined further European treatment, but eventually did well.

CASE 2.—In September, 1890, I was called one evening to a multiparous Mahommedan woman, who had been in labour over twenty-four hours. The waters had been dribbling away all day, but no progress was made. On examining, my finger met the same smooth fleshy sphere, all trace of the cervix being gone; but in this case there was a slight roughness indicating the site of the os, and the cicatrix was more readily torn through, there being no bag of membranes (I could not detect the aperture through which the waters had escaped). On rupturing meconium escaped. The face was presenting and had fixed. I gave the girl an opiate, as the moulding being insufficient forceps failed to deliver. Early next morning pains returned, and the patient was safely delivered of a stillborn well-formed boy. The mother did well eventually, but was much exhausted for some time, owing to the unhealthy surroundings and long-standing anæmia.

It is said that occlusion of the os generally occurs in primiparæ. It may be so amongst Europeans. I should think the probable cause in both these cases was due to the treatment either after previous delivery in the Hindu and during pregnancy in the Mahommedan by the *dhais* or native midwives, amongst whose gynæcological customs it is to pass native uterine sounds to induce a condition fit for pregnancy, and to fill the vagina with boluses made of treacle and herbs.

Haverstock-hill, N.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. MARY'S HOSPITAL.

A CASE OF UNRECOGNISED CERVICAL CARIES; REMARKS.

(Under the care of Mr. EDMUND OWEN, F.R.C.S.[1])

IT is most important to recognise disease in the cervical region of the spine early, as the ultimate success of any treatment undertaken will depend almost entirely on the stage at which the disease has arrived when this treatment is commenced. It is not very unusual to meet with cases of cervical caries in the out-patient department of a children's hospital, in which the patient is said to be suffering from "a stiff neck," "cold in the neck," or rheumatism. It is, however, much more unusual to meet with advanced disease at the age of this patient, for the severity of the pain compels the sufferer to seek efficient medical relief. The account of the case is very instructive.

A. D——, a Welsh servant-girl of nineteen years, was sent to St. Mary's Hospital on May 29th last by Dr. Edward Lewis of St. John's Wood. Of her sixteen brothers and sisters only six are living. On her arrival she appeared pale, delicate, and distressed. She said that she had been in service in London, and that for a long while she had suffered from severe "headaches," chiefly at the top of her head, for which no clear explanation was given nor available treatment found. One medical man told her that London air did not suit her, and that she had better go back to Wales. Others attributed her pains to "rheumatism." She had taken a large amount of medicine, but nevertheless she had got steadily worse, and had at last to give up work entirely. Dr. Lewis wrote that he had seen the girl at a patient's house where he was visiting; the lady asked him to examine her, because she thought that she was too ill to take so long a journey as to Wales. She had been attending as an out-patient at a general hospital for three weeks, and the day before Dr. Lewis's seeing her—such was her story—three medical gentlemen at the hospital had consulted over her, and had pronounced her disease to be rheumatism. Dr. Lewis, recognising not only the existence of cervical caries, but also of a post-pharyngeal abscess, sent her at once to St. Mary's Hospital. Without doubt the girl was extremely ill, and she had, moreover, the aspect of one who was suffering greatly. She could not bear the least pressure upon the top of her head. She held her neck very stiffly, and she could not turn her head without at the same time wheeling round her body, nor could she nod her head. When closely questioned as to the exact parts in which she felt pain she pointed out the areas of distribution of the branches of the great occipital division of the second cervical nerve, and of all the branches of the superficial plexus—the lesser occipital, the great auricular, the transverse cervical, and the twigs of the supra-clavicular nerves in the sternal, pectoral, and deltoid regions. But of all these nerves the great and the lesser occipital were those chiefly distressed, which fact showed that the inflammatory disease of the spine was most advanced in the first and second vertebræ, the second cervical nerve emerging between the atlas and axis previous to giving off the two occipital branches.

Forthwith she was placed flat on her back in bed, a thin, narrow cushion was adjusted beneath her neck, and her head was steadied between two large sand-pillows. The same evening Mr. Farquharson, the house surgeon, opened the post-pharyngeal abscess, much to the temporary relief of the patient. Indeed, for a time she greatly improved; her neuralgias diminished, and, with the advantage of this absolute rest, she gave some hope of recovery. But the pains persisted in considerable degree, and, dreading the least shake or disturbance, she generally lay with her hands up to her aching head. On her admission the temperature was 101°, and during the remainder of the time varied between 99° and 102°. Towards the end it was generally 102° at night and 99° in the morning, she being hectic. She gradually grew weaker, Cheyne-Stokes breathing occurred—the result of pressure upon the medulla,—and she died on Nov. 11th, after several days of complete unconsciousness.

Necropsy.—As the body lay upon the table the attention of the pathologist, Mr. J. J. Clarke, was at once drawn to a marked prominence of the spinous process of the axis. This prominence showed that the transverse atlo-axoid ligament had given way, that the occiput and atlas had been carried forwards, and that the back of the odontoid process pressed against the top of the spinal cord. This, indeed, was the case, an antero-posterior section of the parts showing that a space of half an inch existed between the anterior arch of the atlas and the odontoid process, with the result that the spinal canal behind it had been diminished to an equal extent, so that the odontoid process was thrust against the cord. There was a considerable collection of pus about the atlas and axis, and an opening in the posterior wall of the pharynx showed where the abscess had been originally evacuated. There was, moreover, purulent and tubercular infiltration about the third and fourth vertebræ; the membranes of the cord in the upper cervical region being greatly thickened. Thus pressure was exerted upon the first four cervical nerves not only by purulent infiltration, but also by the thickened dura mater which formed their sheathes.

Remarks by Mr. OWEN.—In some quarters the terms "rheumatism" and "rheumatic" are apparently of very wide signification, their comprehensiveness often being their chief recommendation. The first meaning of the word ῥευματικος is, we are told, a *flux*, or *looseness*—a looseness of diagnosis being, no doubt, included. This is not the time or place for showing how often, amongst other things, the acute ostitis and periostitis of childhood are treated as "rheumatism"; but it

[1] Reported to the West London Medico-Chirurgical Society, Jan. 8th, 1892.

may well be made the occasion of insisting on the fact that the peripheral neuralgias of spinal caries are constantly being misunderstood. The most suggestive feature of the pains of central spinal disease is their symmetrical arrangement. Thus, in the girl whose case is under consideration there was pain in the areas of distribution of the nerves on each side of the head and neck, and over both pectoral and deltoid regions. In lower cervical disease there may be pains in both arms, both elbows, or both hands. And so also with the symmetrical pains in the chest, abdomen, thighs, legs, and feet. In the case of another girl under treatment for lumbar caries, the only parts in which she complained of pains were the balls of the great toes—that is, at the terminal distribution of each long saphenous nerve. She must have run considerable risk of having her neuralgias ascribed to rheumatism, if not to gout. In conclusion, it may be insisted on that rheumatic and gouty pains lack the anatomical precision and symmetrical arrangement which characterise those of tubercular disease of the spine. Still, if a mistake must be made, it is for the greater good of the greater number of patients that rheumatism be taken for spinal disease rather than that spinal disease be regarded as rheumatism. The former error is more inconvenient than harmful, whilst the latter may prove not only an irremediable calamity, but might be reckoned a stupid blunder.

SAMARITAN HOSPITAL FOR WOMEN, BELFAST.

THREE INTERESTING CASES OF ABDOMINAL SECTION.

(Under the care of Dr. W. K. McMORDIE.)

THESE three cases present some point of importance which makes them worthy of record. With regard to ovariotomy during pregnancy, the opinion of Mundé[1] is, "that so far as the chances of recovery from ovariotomy are concerned, they are fully as good as when no pregnancy exists. As regards the continuance of gestation, in the early months usually the prospect is also favourable. In the later months, when the child is viable and likely to survive, the induction of premature labour would appear to be preferable, with subsequent ovariotomy.

CASE 1. *Removal of an ovarian cyst, complicated with pregnancy.*—E. J——, aged thirty-four, married, was sent as a private patient to the Samaritan Hospital by Dr. Clarke of Portadown on Nov. 4th, 1891. She was married on Feb. 13th of the past year, and as the abdominal enlargement appeared shortly afterwards it was believed to be pregnancy. At the time of her admission the abdomen measured forty-eight inches round the umbilicus. A vaginal examination showed the uterus to be enlarged; but it was impossible to be certain of the cause. The uterine enlargement was not sufficient to account for pregnancy occurring about the time of her marriage, and so, if pregnancy existed, it must have occurred after the ovarian cyst had been growing for some time. The patient was not examined with the sound. At the operation the tumour was found to consist of one large cyst with thick wall, containing eighteen quarts of thick dark fluid and seven pounds solid. The uterus was enlarged to about the size of a fœtal head, and was evidently pregnant. The tumour was of the right ovary, and the left ovary was healthy. The uterus was in no way injured at the operation, and the fœtus was not afterwards expelled. There is no reasonable doubt but the pregnancy will go to full time. She made an excellent recovery.

CASE 2. *Large ovarian cyst tapped thirteen times in fourteen months; escape of cyst fluid into abdominal cavity; chronic sepsis after tapping; ovariotomy.*—J. M——, aged thirty-nine, married, had one child eleven years ago, was placed under the care of Dr. McMordie by Dr. MacArthur of Grey Abbey on Sept. 22nd, 1891. The following is the history of the case. She stated she first noticed the abdominal swelling eighteen months before in the right side. For fifteen months she had been under medical treatment. During that time she had been tapped thirteen times—eleven times by her family doctor in the country, and twice by a Belfast physician, on Aug. 29th and Sept. 18th, 1891. No means of ascertaining the measurements of the abdomen after each tapping were found. On Sept. 22nd—four days after the last tapping—the abdomen measured 32 in. round the umbilicus; on Oct. 1st, 33½ in.; Oct. 3rd, 34¼ in.; Oct. 12th, 38 in.; Oct. 16th, 39 in.; Oct. 19th, 40 in. The fluid was evidently rapidly increasing. There were symptoms of chronic sepsis; temperature above normal, quick pulse, and increasing feebleness. It was thought better to wait no longer, but to give her a chance of relief. Assisted by Dr. Henry O'Neill and by Dr. David McKinney acting as chloroformist, ovariotomy was performed by Dr. MacMordie on Oct. 21st. At the point where the cyst was opened it was adherent to the abdominal wall. When the contents had nearly all escaped the opening was enlarged and the hand passed into the cyst, the wall of which was very thin. A large opening in the cyst wall was found towards the diaphragm, through which the intestines were protruding. It was clearly through this opening the cyst fluid had escaped into the abdominal cavity, at which of the tappings it would be impossible to say, but more likely at the last, when the cyst, being only partially filled and the cyst wall more or less collapsed, would most likely receive a double wound from the trocar, and the sudden escape of the cyst fluid under pressure into the abdominal cavity through a very thin and friable cyst wall would increase the hole into a rent. The intestines soon appeared at the abdominal incision, and were with difficulty kept back. Lying towards the left side were three smaller cysts, containing bloody, friable, solid material, which weighed six pounds. The pedicle was broad and thick, and required to be ligatured in three parts. The abdominal cavity was carefully washed out and a drainage-tube left in. Through the tube the abdomen was carefully washed out daily for five days. The case made favourable progress until the seventh day, when the heart's action suddenly failed, and she died at a time when everything seemed to point to a favourable result.

Remarks by Dr. McMORDIE.—The interest in this case consists in the extraordinary number of tappings in so short a time and the escape of the cyst fluid into the abdominal cavity. Among the symptoms of exhaustion noted before the operation were the low specific gravity of the urine and feeble action of the heart. It is a reasonable conclusion to come to from all the facts of the case, that had the ovarian tumour been removed before the frequent and persistent tappings, a favourable result might with confidence have been anticipated. Another point of some interest is that at none of the tappings could there have been complete collapse of the abdominal tumour owing to the presence of so large a quantity of solid. I have reported in every detail this case, in the hope that a knowledge of the consequences that may result from tapping may act as a warning to other operators.

CASE 3. *Tubo-ovarian abscess caused by septic infection after labour, treated by abdominal section; recovery.*—E. McG——, aged thirty-three; had three children, the last one seven months before her admission to the hospital on June 2nd, 1890. On the third day after her confinement she had a rigor and a severe pain in the right ovarian region. She was sent to hospital by her family physician, Dr. Humphries of Mountpottinger. On her admission the temperature was 103° F. An examination revealed a smooth, round, movable lump deep in the right ovarian region. No fluctuation could be detected. With complete rest the pain disappeared, but the high temperature continued, and she got very weak and much emaciated. For some time she would not consent to any operative interference. On July 15th the usual incision was made in the median line. The tumour was covered with intestine and omentum, dipped deep into the pelvis, and was adherent to the intestines. The wall was thick. So firm was it bound by deep adhesions that it was impossible to get more than a small portion of the circumference out of the abdominal incision. A trocar was inserted, and a pint of thick, fetid pus drawn off. The cyst wall was like leather, but it was so firmly held down at the lower part that it was impossible to draw it sufficiently up to apply a ligature at the base. To have done so a much larger abdominal incision would have been required, and more manipulation of the intestines would have been the result, which in the weak and exhausted condition of the patient would have added much to the risk of the operation. The cyst cavity was therefore washed out and the edges sutured to the lower angle of the abdominal incision. A drainage-tube was left in and the cavity daily washed out. The cavity steadily contracted, and the tube was removed at the end of a week, when only a sinus remained. This gradually closed, and she was discharged on Aug. 18th in good health. At the operation, Dr. McMordie was assisted by Dr. Henry O'Neill, and the anæsthetic was administered by Dr. D. McKinney.

[1] Sajous: Annual of the Universal Med. Sci., 1889, vol. ii., f. 30.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Recent Researches in Diabetes Mellitus.—Inflammatory Cervical Swelling communicating with Common Carotid Artery and Internal Jugular Vein.

AN ordinary meeting of this Society took place on Jan. 26th, the President, Mr. Timothy Holmes, in the chair.

Dr. HENRY J. TYLDEN communicated a critique on Recent Researches in Diabetes Mellitus, with an original note on the pathology of the pancreas. Three lines of recent research promised to throw new light on diabetes: M. Lepine's glycolytic ferment in the blood; certain experiments which had been undertaken on the pancreas; and a renewed study of the morbid histology of the pancreas. The object of this paper was to describe some of the more important of these researches, briefly to criticise their methods, but still more to offer some criticism upon the inferences which were being drawn from them. With regard to M. Lepine's work on the glycolytic ferment of the blood, his methods were described. Granting the existence of this ferment in blood drawn from animals, was it a vital phenomenon? The question could not be considered as settled, but there were grounds for supposing that it probably was. He asked if the diminution of this ferment in diabetes could be regarded as the cause of the disease. To this he advanced the following objections: 1. Perhaps all ferments were reduced in wasting diseases. 2. Certain clinical facts warranted us in supposing that diabetes was due, not so much to failure of sugar-destruction as to increase of sugar-production in the system. As to the recent experiments on the pancreas, extirpation was found to be followed immediately by diabetes mellitus. Partial extirpation, injection of the pancreatic duct with irritants and tying of the pancreatic vessels; none of them produced permanent glycosuria, but led to cirrhosis of the pancreas, and were followed by azoturia, polyuria, and wasting. He asked if the glycosuria which followed upon complete extirpation of the pancreas was a result of the removal of the pancreas, or of some lesion incidental to the operation, and he thought that, while there were difficulties in the way of either interpretation, probably the latter was the true answer to the question. Dealing with the morbid histology of the pancreas, he said that cirrhotic changes had been demonstrated in diabetic pancreases, and no doubt correctly; but before we accepted them as the cause of the disease we must ask ourselves the following questions: 1. Was the lesion constant in diabetes? It certainly was not, some diabetic pancreases showing no departure from the normal in their histological characters—certainly none in the direction of cirrhosis. 2. Was it confined to diabetes, or had it wider relations with sundry other diseases? A microscopical examination of some fifty pancreases led to the recognition of two forms of cirrhosis at least—the one coarse and interlobular, often seen in very wasted pancreases, the other finer and intercellular in pancreases not necessarily wasted. The latter form had been found to occur chiefly in patients who were the subjects of granular kidney. It was possible that the pancreatic change might throw light in some cases of chronic Bright's disease upon some of the symptoms of the disease, especially when we remembered that polyuria and wasting were two of the results of artificial cirrhosis of the pancreas. 3. Assuming the first two points, had we any reason to suppose that cirrhosis of the pancreas would, even if present, provoke glycosuria? As far as we knew we had not; experiments went to prove the contrary. As we could not answer one of the questions in the affirmative, we could not accept either the pancreatic hypothesis of diabetes or M. Lepine's form of it.—Dr. GEORGE HARLEY said that the Society was much indebted to the author for an admirable paper. Many seemed to hold the belief that pancreatic diabetes was a newly discovered disease, but Dr. Thomas Corley had published a case in a London medical journal in 1788, and since then many had been placed on record, though their importance had not been fully appreciated until the advent of the experimental pathologist. Many people seemed to think that diabetes in all cases had a similar pathology, and the author appeared to share this opinion. He was sure that this notion was erroneous, and that glycosuria was simply a sign of disease and might own various causes, as was the case with albuminuria. Injury to the fourth ventrilce, a blow on the back of the head, disorder of the liver, all might act as causative agents, as well as pancreatic disease. It was difficult to believe that if total extirpation of the pancreas brought about diabetes, ligature of its vessels would not bring about a like result. Von Mering had isolated the pancreas in the dog from all its attachments except the vessels, and no diabetes had been produced by that procedure. He held that there were two essential kinds of diabetes—that caused by excessive formation of sugar in the blood, and that produced by diminished destruction of sugar—and that the two were not comparable. He held also that atrophy of the pancreas produced glycosuria, and he thought that until a better theory was promulgated Lepine's hypothesis should be accepted.—Dr. ROLLESTON said that any change in the pancreas in association with diabetes could not be regarded as a prime cause of that disease. It was said that if three-fourths of the pancreas were removed no diabetes would result, because sufficient ferment would be produced in the portion left. On this hypothesis blocking of the duct ought to produce diabetes mellitus, because as a result of the tension produced by ligature of the duct absorption of the secretion by the bloodvessels ought to take place. He had seen this duct completely blocked by a calculus, and yet no diabetes result; on the other hand, in a case of marked diabetes he had seen the organ weighing four ounces and of remarkably healthy appearance. In one instance there was such a marked cirrhosis of the organ produced by the pressure of an aneurysm that its structure was so disorganised that it could not be recognised microscopically, and yet diabetes was not present; cases, too, had been recorded in which there were abscess and sloughing of that organ unaccompanied by glycosuria. The polyuria which accompanied the cases in which there was both cirrhosis of the kidney and of the pancreas was much more easily explained in other ways. He thought that any severe disease attacking the pancreas might reflexly so stimulate the medulla as to produce increased metabolism of the liver with resulting diabetes.—Dr. BRADFORD said that there was no fact in recent experimental pathology more clearly made out than the effect of operations upon the pancreas in producing glycosuria. Minkowski at Berne removed seven-eighths of the pancreas from a number of dogs, and no abnormal result followed. He then removed the small fragment which was left, and marked glycosuria was produced. It was idle to suggest that this phenomenon was produced by other lesions in the neighbourhood of the pancreas, for other physiologists had damaged all the structures in the neighbourhood of the pancreas, leaving that organ intact, and still no glycosuria was produced. Minkowski's conclusions were borne out by analogy, for if very large portions of the thyroid were removed, nothing abnormal would happen; whereas if the small remaining fragment were taken away, death would result. If half of one kidney were removed no marked change would be noticed; but if the whole of the other organ were then taken away a widespread disturbance of nutrition would result, wasting, polyuria, and increased secretion of urea being the most marked sequelæ. Ponfick had also demonstrated practically the same thing with regard to the liver. Although physiologists were not at present able to satisfactorily explain these results, yet they showed in a striking way that organs had functions which at first sight they were not credited with. He was of course prepared to admit that diabetes was a symptom, and not a disease. Finally, he referred to two cases which had been under his own care. One was a man who suffered with diabetes mellitus and ascites; at the necropsy a large primary growth of the pancreas was found. The second case died of diabetic coma; he pancreas weighed under an ounce, and was much cirrhosed.—Dr. TYLDEN, in reply, defended himself from certain criticisms that had been made concerning his paper. He did not contend that diabetes was a simple disease; for aught he knew it might depend on many causes. His argument was a twofold one: that in some cases of diabetes mellitus pancreatic change was absent, and also that marked pancreatic change might be present without glycosuria. As to the diverse results following removal of the pancreas and ligature of its duct respectively, he simply stated recorded facts without attempting to explain them.

Though he was not prepared to accept Lepine's theory, he was far from saying that he rejected it; the evidence to justify the latter course was not yet nearly strong enough. Finally, he felt no moral obligation to accept the best hypothesis in the field, and, while he agreed with most of Dr. Bradford's arguments, he could not allow that the analogies proposed helped to remove the difficulty.

Mr. CROFT read the details of a case of Glandular Swelling in the Neck, which became converted into a pulsating tumour-like aneurysm; the common and external carotids and the internal jugular vein were ligatured. The author first narrated the particulars of the case. A young man aged twenty-two was admitted into St. Thomas's Hospital, under Mr. Croft's care, on June 4th, 1891. A small swelling had appeared on the right side of the neck, opposite the thyroid cartilage, after sore-throat, about eight weeks before his admission. This swelling became rapidly larger a week before he applied to the hospital. At the time of admission the swelling was about as large as a pullet's egg, and was situated over the bifurcation of the common carotid. It was examined for pulsation, but none was observed. During the evening of the second day the swelling rapidly enlarged, and this was accompanied by fresh pain and a little difficulty in swallowing. The next morning the tumour was found to be strongly pulsatile, with distinct expansile movement. Mr. Croft saw the patient on this day (the third), June 8th, and decided at once to explore the swelling. The diagnosis presented considerable difficulty. The common carotid trunk below the swelling was first exposed; next the swelling was incised, and shown to be in communication with a large artery. It was found necessary, in order to arrest all hæmorrhage, venous and arterial, to tie the common and the external carotid arteries and the internal jugular vein. No pus was found or any definite abscess. The operation was performed throughout with careful antiseptic precautions. Carbolised silk ligatures were employed. Recovery was complete, though complicated by congestion of the left lung. The ligatures remained buried in the wound. The nature of the morbid action was briefly discussed. The other point adverted to was the immediate and permanent abolition of the inflammatory process, with its destructive tendencies, although no collection of pus or any inflamed glands had been removed.—The PRESIDENT remarked that the case recalled forcibly one placed on record by Liston, in which the patient lost his life in consequence of having a collection of pus opened in the neck without it being ascertained that it communicated with an artery. Mr. Croft's case showed how possible it was for inflammatory softening to cause giving way of vessels at a particular moment, and it illustrated the old surgical adage that suppuration around a vessel might lead to communication with that vessel. He himself had seen a case in which a large swelling of the ham was punctured, and the abscess communicated with the popliteal artery. In Mr. Croft's case no pus was seen, but it was possible if a small quantity were present it would be masked by the larger quantity of blood contained in the swelling. He believed that there were as many as twenty cases on record in which the common carotid artery and internal jugular vein were tied simultaneously.—Mr. BARWELL dilated on the possibility of the swelling being really an abscess. There was fluctuation previous to the commencement of pulsation, and this fluctuation must have been due to a fluid collection. As the case was inflammatory, he thought the fluid was probably pus, and this might have been very readily carried away in the blood stream without inducing symptoms; so that not seeing pus at the time of opening did not militate against its being an abscess. He inquired why such stress was laid upon the use of silk ligatures.—Mr. CROFT, in reply, said that as to the question of pus being present he certainly did not see any. The origin was inflammatory, and whether the inflammation ended in pus-production or in exudation short of that did not matter; the pathological destructive process was equally effective He was not at all prepared to agree that if pus entered the arteries or veins no harm would ensue; but it was a fact that from the moment the operation was completed, and the pneumonia recovered from, the patient became convalescent. He did not think that such a result could possibly have occurred if pus had got into the veins. He preferred a silk ligature because it was more durable than catgut or kangaroo tail; it was thoroughly reliable, and caused no irritation when properly prepared and buried in the wound.

MEDICAL SOCIETY OF LONDON.

Compound Fracture of Skull in Children.—Bronchiectasis in Children.—Plastic Operations for Contracture following Burn.—Syringomyelia.—Sarcoma in Association with Multiple Exostosis.—Primary Chancre of Cheek.

A "CLINICAL" meeting of this Society took place on Jan. 25th, the President, Dr. Douglas Powell, in the chair.

Mr. J. H. MORGAN brought two children who had suffered Compound Fracture of the Skull. The first was a boy aged two years, who fell from a window on the third storey, alighting on his head. He was admitted within a few minutes to Charing-cross Hospital. He was conscious, there was no paralysis, but the pupils were dilated. The back of the head appeared flattened. From one parietal eminence to the other extended a large hæmatoma, at the extremities of which were two minute punctures. On pressing this swelling, clots mixed with brain substance exuded from each. He was immediately anæsthetised, and an incision carried from one puncture to the other over the vertex. A double line of fracture was seen running from one parietal bone to the other, and extending on each side beyond the end of the incision. At the apex of the right parietal bone was a detached piece, which was depressed, and had penetrated the brain. From both extremities of the fracture brain matter exuded. A trephine was used, and the depressed piece was elevated. Two or three other pieces of bone which were detached were lifted out, and a stream of warm boracic lotion was forcibly injected, and altogether about a drachm and a half of brain tissue was washed out. The pieces of bone were kept in warm boracic lotion, were replaced as nearly as possible in their natural positions, and the pericranium brought over them and united with catgut sutures. A small drainage-tube was inserted at the right extremity of the wound. Except that a considerable amount of swelling of the forehead took place from extravasated blood, the child had no bad symptoms, and the greater part of the wound was healed on the ninth day. Granulations covered the two extremities of the wound, and except for an exanthematous rash on the fifteenth day, the boy had no bad symptoms. One minute crumb of bone came away from the wound over the left parietal bone. The accident happened a year ago, and the boy had had no headache, no fits, and the scars showed no depression nor any pulsation.

Mr. MORGAN showed a second case, that of a boy aged seven, who was knocked over by a hansom cab. He was conscious when admitted. Blood and brain substance were found on his collar. There was a scalp wound with jagged edges about three inches long over the right parietal bone, not exposing the bone. On the left side was an irregular wound reaching from behind the ear backwards towards the occipital protuberance, just above the situation of the superior curved line. As this exposed a fracture, an incision was made at right angles to the wound and running obliquely upwards towards the lambdoid suture. It was then seen that the squamo-parietal suture was separated, and a fracture was seen running across the upper part of the parietal bone from the lambdoid suture behind to the coronal in front. A large area of the parietal bone was depressed, and from the interval at the squamo-parietal suture brain substance and blood were oozing. The depression not being great, no attempt was made to elevate, but the parts were syringed with a forcible injection of boracic acid lotion, the pericranium adjusted, and the scalp wound united. The amount of brain substance lost was considerable, but could not be estimated. Every precaution was taken to render the wounds aseptic, but owing to the amount of dirt which had been ground in, that on the right side suppurated. The other healed directly, but about a month after leaving the hospital a small superficial abscess formed in the neighbourhood of the wound, which healed rapidly after being incised. The boy had remained perfectly well, and had had no fits.—Mr. SHEILD asked if, in a similar accident to an adult, Mr. Morgan would replace the bone.—The PRESIDENT inquired if any twitchings or convulsions had been observed in either case.—Mr. MORGAN, in reply, said he would be inclined to try the same expedient in the case of an adult; certainly no harm would be likely to follow under aseptic conditions. There were no convulsions.

Dr. WALTER CARR showed a boy aged eight years suffering from an early stage of Bronchiectasis. He had been subject

to winter cough from infancy, and this had continued during the summer for the last year or two. The boy was now rather blue, and very short of breath on exertion. The cough was distinctly spasmodic in character, but not accompanied by sickness, and no fetor of breath or expectoration was observed. Physical examination gave no sign of emphysema, and there was no deficient resonance over the lungs, but very abundant moist gurgling and bubbling râles were heard over both bases, especially on the left side. The heart was normal and the general nutrition was fairly good.

DR. WALTER CARR also showed the lungs from a case of Bronchiectasis in a child just three years of age. The child had had whooping-cough when a year old, but apparently got quite well; it had never been free from cough for about twelve months, and had gradually wasted. It was treated for three weeks in the Victoria Hospital for Children in June, 1891, as a case of phthisis, but the temperature was usually subnormal, and only once rose above 100° F. Since June she had been an out-patient under Dr. Carr; she had a markedly spasmodic and choking cough, unaccompanied by sickness; the breath and expectoration were very fetid. The physical signs were those of general bronchitis, with very deficient resonance at the right base and gurgling râles, varying in number from time to time. The child died suddenly on Jan. 19th, owing, it was found, to pneumothorax on the left side, but the most important changes were found in the right lung—the upper lobe was mostly in a state of grey hepatisation, whilst the middle and lower lobes, which were very adherent to the chest wall, sank in water, and consisted almost entirely of bronchial tubes greatly distended cylindrically, and surrounded by firm fibrous tissue. Dr. Carr said that the cases usually began either as a chronic bronchitis which ran on to bronchiectasis rather than to emphysema; or they were a sequel to pneumonia, and the cases in which the disease was localised strongly suggested this. Nearly all these cases were apt to be regarded at first as instances of phthisis; but the fact that a subnormal temperature was present would help to distinguish them. The physical signs were limited to one or both bases, and there was very little general wasting until the later stages. In nearly all there was an absence of fetid breadth and of fetid expectoration. The prominent symptoms were the spasmodic cough, dyspnœa, cyanosis, and gurgling râles at one or both bases.

Dr. WALLIS ORD also brought two cases of Bronchiectasis in children. The first was a girl aged nine, who had had measles and whooping-cough seven years ago. Four years ago there was dulness and tubular breathing at the base of one lung; the temperature, which was at first high, afterwards became subnormal, and remained so. At the present time there was dulness at the left base below the scapula, with amphoric breathing, coarse râles, and pectoriloquy.

The second case shown by Dr. W. ORD was that of a boy aged four, who had likewise suffered from measles and whooping-cough, which in 1889 were followed by an attack of acute bronchitis of obstinate character. Six months afterwards bronchiectasis was discovered, which was at first mistaken for phthisis. The temperature was subnormal, and the boy had put on flesh since the summer. He was, unfortunately, unable to obtain sputum in order to demonstrate the absence of bacilli.—The PRESIDENT remarked that the occurrence of these changes independently of emphysema was interesting, and had not been observed by himself. In cases of diffused general bronchiectasis it was usual to find emphysema. Clubbing of the fingers was also a common accompaniment. He presumed that in Dr. Ord's cases, which were unilateral, the cause was an inflammatory one.—Dr. COLET-LARKIN of Ramsgate inquired if there were any family history of bronchiectasis in these cases.—Mr. BERNARD PITTS said that the diagnosis of bronchiectasis from abscess was important, in view of the possibility of surgical interference in these cases. He recently saw a case with Dr. Lees in which there were signs of a large cavity in the left lung, the patient being emaciated, the expectoration offensive, and the temperature fluctuating. There was no antecedent history of bronchitis or of foreign body. He resected a rib, allowed a week to elapse for the lung to become adherent to the chest-wall, and then incised the lung. He was unable to hit a cavity, although he got a little pus. At the end of a week an acute pneumothorax developed, for which the pleura was opened and drained, but the patient died. At the necropsy a large bronchiectasis was found which it would have been impossible to drain effectually. The large amount and the offensiveness of the expectoration were marked features in the case.—Dr. PERCY KIDD, referring to diagnosis, said that, unless putrescence of sputum were present, the nature of the case usually remained doubtful, but that putrid sputum, with periodical large evacuations, were characteristic of the affection. In many cases where the tissues looked healthy to the naked eye, under the microscope there would be found a lesion in the walls of the bronchi, a diffuse peri-bronchitis—the peri-bronchitis fibrosa of the Germans. They usually had recurrent attacks of bronchitis, and broncho-pneumonia, if it developed, did not go on to complete absorption; there was thus a repeated fibrinous deposit about the bronchi, impairing the elasticity of the tubes and favouring the occurrence of bronchiectasis. Surgeons usually found it hard to hit the cavities, they did not drain well, and the patients generally succumbed a few weeks afterwards. Under these circumstances, if a definite vomica were found, it might be right to recommend incision; but it should be explained to the patient and friends that the chances of success were slight.—Dr. CARR, in reply, referred to Dr. Fagge's observations on the occurrence of bronchiectasis without emphysema. He said that neither of the children he had shown had clubbing of the fingers, and there was no family history of importance. The diagnosis from abscess was helped by the facts that in bronchiectasis the onset was usually slow and the temperature subnormal. It was important to diagnose before putrescence was present. In four cases which he had published in the *Practitioner* putrescence was present in none, though the diagnosis of bronchiectasis was confirmed in all at the necropsy.—Dr. W. ORD, in reply, said that the younger child which he showed had distinct clubbing of the fingers. In the girl's case the lesion was certainly secondary to a broncho-pneumonia; but in the boy, who had been carefully observed for a very long time, no such lesion was noticed.

Mr. BERNARD PITTS showed a case of Plastic Operation for Contracture following Burn. The patient, a girl aged eleven, was badly burnt on the left arm in December, 1890, by the upsetting of a paraffin lamp; the burn extended over the greater part of the arm and over the upper part of the forearm. She was admitted to St. Thomas's Hospital in September, 1891, with a tense band of scar-tissue, causing flexion of the forearm at rather less than a right angle, the scar-tissue extending over the whole circumference of the forearm; the only healthy skin was at the posterior surface of the upper arm and over the posterior aspect of the elbow-joint. The elbow could be extended to a right angle, and flexed about fifteen degrees, rotation being fairly free. A month later the band in front of the elbow was divided down to the muscle and vessels, and the denser part of the tissue dissected away, a very wide gap of five inches being thus made. It was found impossible to completely straighten the arm, even when the superficial fibres of the biceps and of the muscles arising from the external condyle had been divided. A large flap of skin was then raised from the posterior aspect of the upper arm, glided across the gap, and secured in position with sutures. A considerable raw surface was still, however, left both above and below the flap, in addition to the large wound made by raising the flap. These raw surfaces were carefully covered by a number of parings from the skin of the thigh and legs, taken after the method of Thiersch. The grafts were cut as thin as possible with the razor, leaving the deeper structures of the skin behind and only just causing slight punctiform bleeding. The grafts varied in size from a florin to a five-shilling-piece. All these thin grafts lived, but one thicker piece, taken from the thigh and consisting of nearly the whole thickness of the skin, died. The condition of the arm was now very satisfactory, there being free movement in all directions, except some limitation of complete extension. This limitation was no doubt due to the burn having extended to the superficial part of the muscles. He found Thiersch's grafts of great value both in covering the raw surfaces above and below the glided flap and also in covering the wound at the back of the arm. He had not trusted entirely to this method of skin grafting, because he was anxious to have a substantial flap of glided skin across the bend of the elbow, it being more supple and less likely to be irritated by movement.

Dr. ORMEROD exhibited a male, aged nineteen, a labourer, who was otherwise healthy, but who appeared to be the subject of Syringomyelia. He experienced a sensation of pins and needles in the right hand seven or eight years ago, followed by inability to close his hand properly. The right hand, and subsequently the left, had wasted gradually. At present

there was atrophy of all the intrinsic muscles of the hands, and a certain amount of wasting of the muscles of the forearms, especially upon the flexor aspect, and most markedly in the right limb. The upper arms were in fair condition; there was no fibrillar twitching and no reaction of degeneration, but there was reduction of electro-contractility, and, indeed, abolition of it in some muscles. There was a well-marked lateral curvature, with its convexity to the left in the dorsal region. The lower limbs were natural, and the sphincters were not affected. As to sensation in the upper limbs, he felt touches, though apparently not perfectly, in the right hand; he also felt pain, such as pinching and dry faradaism, but confused heat and cold. On the strength of the chronic muscular atrophy, the lateral curvature, and the peculiarity of sensation, the case was brought forward as being probably syringomyelia.—The PRESIDENT asked where the exhibitor placed the lesion, and if he associated the cord disease in any way with the curvature.—Dr. TAYLOR considered that there was little doubt but that the case was one of syringo-myelia. The curve might be due to unilateral weakening of the trunk muscles as a result of the cord-lesion. It was peculiar in having such a very long history, but he had seen another case which resembled it in this respect, and in which the diagnosis was confirmed post mortem. In a second case he had examined the symptoms were of but two years' duration, but it was accompanied by so great a weakness that the patient could not stand or feed himself.

Mr. BRUCE CLARKE sent a case of Multiple Exostosis in a man of thirty-six, and one of the osteomatous growths had developed into a sarcoma. All the exostoses stopped growing at the age of twenty-five, but the mass in the abdomen started growing four years and a half ago, and now filled the whole of the left side of the pelvis. The inguinal glands were enlarged, there was difficulty of defecation, and increased frequency of micturition; pain was also present along the course of the great sciatic and obturator nerves.

Mr. MARMADUKE SHEILD showed a case of Primary Chancre of the Cheek. The patient was a woman aged thirty-four, and a widow. Near the centre of the left cheek was a formidable-looking, dusky coloured swelling the size of a florin. The edges were sharply defined, and it was devoid of discharge or ulceration. The submaxillary glands were much enlarged, and the skin covered with a dusky syphilide. The patient was taking mercury energetically, and the chancre had already reduced in size, while the rash had faded. The case had come under his care fourteen days ago. There was no history of infection, and all that was known was that the "sore" had existed for about two months. Mr. Sheild especially referred to an almost exactly similar case, with an illustration, published by him in the *British Medical Journal* of Feb 5th, 1887.—Mr. WAINEWRIGHT remarked on the peculiarity of the chancre, which had changed in character since it had been under treatment.—Dr. HERON thought that if the lesion were primary it was too early to see periosteal symptoms; it might possibly be a secondary manifestation, the primary sore being situated elsewhere.—Mr. JULER had seen a great many cases of chancre on the eyelids. He would not at first have looked upon the lesion as primary, as it was associated with so many other symptoms of advanced syphilis.—Mr. SHEILD, in reply, emphasised the fact that the case was one of bad syphilis which had been untreated for three months, and in such cases it was not at all unusual for so-called late manifestations to occur early. In a bad case he had seen gummata in the testis four months after infection. In the present instance there was marked amygdaloid submaxillary bubo, and the skin was covered with an early syphilitic roseola. It was probably produced by accidental inoculation of a previously existing abrasion.

CLINICAL SOCIETY OF LONDON.

Tracheal Tugging in Aneurysm of the Aorta.—After-treatment for Scissors-legged Deformity.—Aneurysmal Varix.—Hypertrophy of Left Lower Extremity—Aphasia.—Congenital Deformity of both Legs.—Amputation for Gangrene after Ligature of Femoral Artery and Vein for Punctured Wound.—Suppurating Pulmonary Hydatid treated by Incision.

AN ordinary meeting of this Society was held on Jan. 22nd, the President, Sir Dyce Duckworth, being in the chair. An exhibition of clinical cases first took place.

Dr. FREDERIC TAYLOR showed a patient who had Tracheal Tugging in association with Aneurysm of the Arch of the Aorta. After referring to the paper on this subject published in THE LANCET by Dr. McDonald in March last, Dr. Taylor stated that the patient possessed many of the usual signs of aneurysm; there was huskiness of the voice, inequality of the pulses, and diminution of breath sounds at the left base. On taking the cricoid cartilage firmly between the finger and thumb and lifting it upwards, the communicated pulsation or "tugging" of the aneurysm was distinctly felt.

Mr. BERNARD PITTS showed a case to illustrate the After-treatment for Double Ankylosis of the Hip, or Scissors-legged Deformity. The boy was nine years of age, and came under his care a year ago. The left thigh was ankylosed in front of the right, and he could only shuffle along on his toes. The ankylosis was osseous, and was the result of inflammation following a fall four years previously. He had been treated by extension in the Leicester Infirmary. Mr. Pitts first made a section of the left femur below the trochanters, and fixed it in a straight position. He then took a wedge out of the neck of the right femur, but this procedure was followed by suppuration and necrosis, necessitating the excision of the head of the bone. Movement had since been kept up on the right side, and the boy for the last month had been able to walk.

Mr. FREDERICK PAGE of Newcastle showed a pitman who, five weeks ago, received a stab in the left side of the neck. Hæmorrhage was at first checked by pressure, then the wound was enlarged, and a vein which was divided was tied. The next day a swelling was found which extended from the thyroid cartilage to the sterno-clavicular joint, and there was a thrill which was characteristic of a communication between an artery and a vein. The exhibitor thought that the lesion was an aneurysmal varix between the carotid artery below its bifurcation and the internal jugular vein; he gave reasons for this opinion. The patient at present complained of a constant buzzing noise, and he could not express himself freely. Mr. Page referred to a case of aneurysmal varix in the popliteal space which occurred a few years ago, and in which, after twelve years, an aneurysm of the popliteal artery developed.

Dr. COUTTS and Mr. DUNN exhibited a girl with Hypertrophy of the Left Lower Extremity. The limb commenced to swell shortly after an attack of scarlet fever, and the hypertrophy now involved all the tissues. There was neither albuminuria nor chyluria, but Dr. Coutts thought he had found a worm in the blood larger than filaria sanguinis hominis. The femoral artery had been tied, and since then the limb had decreased in size.

Dr. HADDEN brought forward a woman, aged twenty-seven, affected with Aphasia. A year ago she was attacked by right hemiplegia, which was apparently of syphilitic origin. She could remember very few words, but her automatic utterances remained, such as the words of a few hymns and prayers. There was no heart disease.

Mr. OPENSHAW exhibited a child with Congenital Defects of the Upper and Lower Extremities. There was no family history of similar deformity. There were deep grooves round both legs, and both fingers and toes were undersized, and for the most part nailless. The left foot exhibited talipes equino-varus. There was no spina bifida.

Mr. MANSELL MOULLIN demonstrated a case of Fracture of the Lumbar Spine for which he had performed laminectomy. On Jan. 1st, 1891, the patient had fallen down a chalk pit, and was picked up unconscious with the lower limbs paralysed. The medical man who saw him extended the spine manually, which was followed by temporary improvement; still he could not move the left hip, and both limbs below the knee remained paralysed. Nine weeks after the accident he removed the second and third lumbar spines, with the corresponding laminæ, and as the second lumbar vertebra appeared to be twisted he removed its right lower articular process. He was unable at the operation to determine the nature of the injury. Two days afterwards sensation on the left side began to improve, and he had now completely recovered power except in the left tibialis anticus and the extensors of the toes. These muscles, however, were the only ones which had lost their reaction to faradaism before the operation; but at the present time (twelve months after the operation) they commenced to show signs of returning power.

Mr. LEONARD BIDWELL showed a woman forty seven years of age who five years ago noticed Pigmentation at the end of the Thumb, and six months ago a Melanotic Tumour formed.

At the end of last September he removed the tumour, together with the surrounding skin. Before the wound cicatrised pigmentation commenced round the scar, which had since increased in extent; but there was no recurrence of the tumour, an enlarged axillary gland being apparently accounted for by a sore on the back of the hand. There was no history of a mole existing at the site of the growth.

Mr. HERBERT ALLINGHAM read a paper on a case of Punctured Wound of the Thigh, in which the femoral artery and vein were divided. Gangrene of the leg followed ligature of the proximal and distal ends, and the limb was finally amputated through the knee joint. Frank S——, aged twenty-eight, was admitted into the Great Northern Hospital on Nov. 30th, 1889. While cutting some bacon with a long, sharp butcher's knife his hand slipped, and the knife penetrated the inner part of the right thigh just at the apex of Scarpa's triangle. A considerable deal of blood shot out. He at once applied pressure, and was brought to the hospital, where, after a tourniquet was applied, it was found there was a small wound about an inch long, from which, on loosening the tourniquet, blood spurted. The surrounding tissues were infiltrated with blood, and there was no pulsation in them. The whole of the limb was tense and very swollen, the foot was quite cold and pale, and there was no pulsation in any of the vessels of the leg. The patient's general condition was bad, he was very blanched, complained of thirst, swimming in the head, and was extremely restless. Esmarch's bandage was applied and the divided vessels cut down upon. On exposing the sartorius it was seen that that muscle had been penetrated, so it was cut across and the ends turned upwards and downwards. A large blood clot was then exposed and turned out, and at the bottom of the cavity was seen the femoral artery and vein completely divided just as they entered Hunter's canal. Both ends were secured. The wound was then sewn up, having been previously well irrigated. The leg and thigh were enveloped in cotton wool, and kept warm with hot bottles. The next day the leg appeared warm, but on Dec. 2nd, two days after the operation, the foot began to have a waxy appearance. The calf became much swollen and painful, and on Dec. 3rd the foot had become gangrenous, of the dry variety, and this increased and spread very slowly up the leg to about the middle of the calf. The leg remained in this condition until Dec. 23rd—when the temperature rose to 105°, the gangrene becoming moist, and with that state of things he amputated at once through the knee-joint by Stephen Smith's method, and the next day the temperature returned to normal. When amputated it was seen that both the popliteal artery and vein were plugged, and the cutaneous vessels bled rather freely. The wound was a long time in healing, as the edges of the skin sloughed. The interest of this case lay in the following facts:—The gangrene when once pronounced did not extend for three weeks. Amputation was done through the knee-joint. His reason for delaying to remove the dry gangrenous leg was because, since the constitutional symptoms were favourable, it was better to wait in order that the collateral circulation might become well established. If he had amputated early he thought the incision would have had to be made through the wound in the thigh, where the femoral vessels were ligatured, as that wound was not healed, and therefore there was still a fear of secondary hæmorrhage.—Mr. HARRISON CRIPPS said that two questions were raised for discussion: the primary treatment of the case and the right time to perform amputation after gangrene appeared. If there were doubts what vessel was wounded, he held it right to trust at first to graduated pressure properly applied, the limb being bandaged from below upwards, an outside splint put on, and a roller firmly applied above and below the wounded spot. But in the case related the evidence was so clear that the femoral was divided that the right practice was at once to cut down and tie the ends. When gangrene occurred the practice should be the same whether it were due to wound, ligature, or embolism of the artery. The portion of limb which died was usually the foot with the lower half of the leg, the thigh generally not being affected. The gangrene usually caused but little constitutional disturbance, and in that case the line of demarcation should be waited for; it was usually about four inches below the knee, and amputation should be performed immediately above it. If the patient were old and feeble nature might be allowed to effect separation down to the bone.

Dr. W. M. ORD and Mr. H. B. ROBINSON contributed notes of a case of Suppurating Hydatid of the Lung, treated by incision of the lung and removal of the hydatid. The patient, a youth aged eighteen, a telegraph messenger, was admitted to St. Thomas's Hospital on Oct. 25th, 1890. He had had "pleurisy" in the right side four months before admission, was in bed for two weeks, and then "recovered completely." He had had a cough for five weeks before admission, and after this had lasted two weeks he was seized with a pain in the right side, and brought up a quantity, estimated by him as half a pailful, of an opaque yellowish-white fluid. From that time he was confined to his bed, could only lie on his right side, and suffered from considerable dyspnœa. He had had profuse expectoration, and latterly troublesome diarrhœa. On admission the patient was pale and sallow, with a hectic flush and a look of anxiety. His breathing was rapid, short, and painful, and his breath fetid. The temperature was 101°; pulse 120; respiration was almost entirely diaphragmatic, and was 54 to the minute; there was dulness over the lower fourth of the right lung behind and impaired resonance as high as the fourth rib in front; vocal fremitus was slightly increased over the dull area, and loud bubbling crepitations were heard (a few hours after admission these disappeared, and were replaced by cavernous breathing, the patient having coughed up in the meantime more than a pint of frothy and offensive muco-pus); there were bronchophony and whispering pectoriloquy over the dull area; there was tubular breathing, with increased vocal fremitus, over the base of the left lung posteriorly. Heart and abdominal organs normal. The diarrhœa continued after admission. Stools liquid, brownish-yellow, and offensive; urine, sp. gr. 1030, no albumen, sugar, indican, or blood. Some hours after admission an exploratory puncture was made, and about one ounce of thin sanious blood was obtained, with numerous flakes of membrane; no hooklets were found; the sputum contained neither hooklets nor tubercle bacilli. The symptoms pointing to a large cavity actively secreting pus, Mr. Robinson, on the third day after admission, proceeded to operate. No general anæsthetic was used, but the ether spray was employed for the skin incision, which was made from the angle of the seventh rib to the inferior angle of the scapula, the periosteum of the rib was detached, and one inch and a half was resected. On careful section in the space thus left a cavity was reached about a quarter of an inch from the rib. No pleural cavity was found, and on cutting into the lung there was no hæmorrhage. About half a pint of stinking pus, with gas, escaped from the wound, followed by a very large and collapsed hydatid cyst. Two drainage-tubes were introduced, but owing to the patient's condition the cavity was not washed out. Soon after the operation the patient had a rigor, and the temperature rose to 102·4°, but sank to normal four hours afterwards. The wound was dressed in the evening, with the escape of a large quantity of pus. On the following day the cough was not so troublesome and the expectorations hardly offensive. The cavity was washed out with three pints of weak Condy's fluid. This was repeated on the following two days, at intervals of twelve hours, and the discharge became less profuse and less offensive. The diarrhœa continued very bad, and the patient gradually became exhausted, and sank on Nov. 10th, thirteen days after the operation.—Post-mortem examination: A large cavity occupied almost the whole of the lower lobe of the right lung, and about the artificial opening only a very thin layer of lung could be seen beneath the greatly thickened pleura. The cavity had a smooth wall, and, though containing some shreds of exudation, was practically empty. The surrounding lung was the seat of chronic interstitial pneumonia. Between the parietal and visceral layers of the pleura round the upper lobe was an empyema, which had no connexion with the hydatid cavity. The upper lobe was compressed, and the seat of acute broncho-pneumonia. The lower lobe of the left lung was semi-solidified by collapse and broncho-pneumonic foci. There was acute pericarditis, but the cardiac valves and muscle were normal. The liver contained two hydatid cysts. The other organs were healthy, and no other cysts were found. It was evident at the time of admission that he had a large abscess of the right lung partially discharging through the bronchial tubes. The enormous amount of discharge occurring suddenly five weeks before suggested the existence either of a suppurating hydatid or of empyema bursting through the lung. The latter supposition was not favoured by physical signs. The operation would have been performed earlier but for the necessity of communi-

cating with the boy's parents. As an operation for pulmonary abscess it proved successful, but from the long previous duration of the case pyæmic infection had occurred.—Mr. C. MANSELL MOULLIN gave details of a case of hydatid cysts of the liver, which ruptured into the peritoneal cavity, and in which abdominal section was performed. The patient was a thin anæmic youth, aged nineteen. The tumour was first perceived eight years ago. In September, 1889, something gave way in the abdomen; the swelling disappeared, and an eruption of urticaria, with slight shock, followed. Ascites set in afterwards, and the patient was admitted into the London Hospital under Dr. Stephen Mackenzie. The abdomen was aspirated on three occasions, fifteen to twenty pints of dark greenish-brown fluid being evacuated each time. Hooklets were found in the last. Abdominal section was performed on Dec. 28th, an immense quantity of fluid draining away. Recovery was very much delayed by the slowness with which the cyst wall separated and the difficulty of extracting the sodden fragments. In about three weeks bile ceased to make its appearance, but the patient did not rally. A few days later a second much larger cyst with thicker walls burst into the suppurating cavity, the shock on this occasion nearly proving fatal. Then the cavity slowly contracted, and the patient was discharged with the wound healed in April. Attention was directed to the very different estimates of the mortality attendant on rupture of the hydatid cysts into the peritoneal cavity and the great difference to the severity of the symptoms, especially the degree of shock. It was pointed out that the symptoms of poisoning that usually followed could only result from some constituent of the fluid itself, possibly a ptomaine, the presence of which in living active cysts had been shown by Langenbuch and confirmed by Brieger and others. This would also serve to explain the results obtained experimentally by Roy and Humphry. On this supposition the subsequent onset of peritonitis and its severity must be regarded as dependent chiefly upon the nature of the débris that entered the peritoneal cavity at the same time.—The PRESIDENT asked the experience of surgeons as to whether these cavities should be washed out. His own feeling was that they should not be so treated.—Mr. HOWARD MARSH said that the difficulties were very great when one attempted to do anything active surgically to the lung itself. The hæmorrhage on incision into its substance was profuse, and there was great difficulty in getting sufficient room, even if ribs were freely removed. It was a difficulty, again, to leave the wound in an aseptic condition because of the usual free communication with bronchi. He referred to a case in which a patient had apparently a simple empyema, but the sinus would not close. Portions of ribs were removed, and there was extremely severe hæmorrhage. The sinus still remained open, and a quantity of blood had since escaped both from the sinus and by way of the bronchi, though he had no clue as to its cause. He thought that hydatid cavities should not be washed out. A little time ago he saw a lady, in consultation with Dr. Douglas Powell, with a chest complaint. It was thought to be empyema and a portion of rib was resected, when there gushed out a large quantity of hydatid material. It must have been hepatic in origin, for afterwards there was a free discharge of bile; the patient ultimately did well. He once nearly destroyed a patient by washing out with weak iodine a chest cavity which communicated with a bronchus.—Mr. ROBINSON, while agreeing that as a rule chest cavities should not be washed out, pointed out that in the case under discussion the cavity was large, the pus was malodorous, and the patient was suffering from septic poisoning. The injection of a small quantity of weak Condy's fluid had no bad effect whatever.—Dr. ORD, in reply, while agreeing that a cavity containing living hydatids might be opened and left, yet when they were suppurating he saw nothing to distinguish them from any other abscess, and held that it was proper treatment to wash them out.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, DEC. 9TH, 1891.

Mr. BENNETT MAY, F.R.C.S., President, in the chair.

Bulbar Paralysis, with Bilateral Paralysis of the Abductors of the Vocal Cords; Death after Tracheotomy.—Dr. SUCKLING read notes of the case of a man aged forty-three, a commercial agent, who was admitted into the Queen's Hospital under his care on account of attacks of urgent dyspnœa. He had been ailing for three or four years, and had gradually become worse. His speech was slurred and thick. The lower lip hung down flabbily, and he had to press it against his gums when eating. There was distinct paresis in the lower part of the face on the left side. He suffered also from dysphagia, especially for liquids. The soft palate and uvula were relaxed, but not quite paralysed. He could protrude the tongue, but its movements were feeble. Phonation was feeble. He had no power of expectorating, and this gave him much discomfort. There was paresis and wasting of the left deltoid, and wasting of the left supra- and infra-spinati. The thenar eminence on both sides was flattened. The vocal cords were adducted on inspiration, and were drawn closely together, occasioning stridor; on expiration they were slightly separated, the edges vibrating. Dr. Suckling did not consider it safe for the patient to leave the hospital until tracheotomy had been performed, and the patient himself was very anxious to have the operation done. He was in a very feeble state, being obliged to sit up in bed to breathe, and his breath sounds over both lungs were very feeble. A few hours after the operation was performed, no anæsthetic being used, the patient became suddenly worse and was cyanosed. The breathing became very slow and shallow, and soon ceased. There were no history of syphilis, the knee-jerks were normal, and there were no signs of locomotor ataxia. A microscopic examination of the medulla had not yet been made. The occurrence of paralysis of the abductors of the glottis in bulbar paralysis was rare. The man had been a drinker, but had never worked in lead.

Sarcoma of Radius.—Mr. HEATON showed this specimen. The clinical history was very meagre. Had noticed swelling of forearm for three months. Swelling was painless, but slightly tender on pressure, and had lately become more tender. Three days before admission it suddenly increased in size. Typhoid fever six months before; no history of tumour. He had fairly well defined swelling in upper two-thirds of right forearm, chiefly over dorsal aspect of radius. Swelling firm and elastic, softer in places, tender, attached to radius; no pain in swelling at night, nor rise of temperature. Diagnosis lay between chronic ostitis, periostitis, or some form of new growth. The attacks of pain, rapid history, also of raised lump and history of sudden increase in size without any evidence of inflammation, all pointed to new growth. Grooved needle drew off a little blood. An incision made into tumour showed bone enlarged, and encountered a soft, vascular, marrow like tissue. Amputation refused, but consent afterwards given; performed. Boy made good recovery; seen a few weeks ago in good health. The specimen was a well-defined and encapsuled sarcoma of shaft of radius. Bone thickened by deposit of new bone from periosteum. Growth seemed to have started in the medulla, but, instead of expanding the bone, to have perforated it and enveloped it as a periosteal sarcoma would. Tumour, very vascular when fresh, had shrunk and become pale in alcohol. Microscopically, a myeloid sarcoma, with numerous well defined multi-nucleated giant cells. The case is interesting on account of the extreme rarity in which a myeloid sarcoma grows from the shaft; nearly always at one articular end, and then expands the bone around it.

Disease of Testicles.—Mr. BARLING showed a patient, aged thirty-one, with acute tubercular disease of both testicles. The disease was attributed by the patient to an injury three months ago, but the history of this is uncertain. When first seen each epididymis was a good deal enlarged, irregular, and very tender; a little fluid existed in each tunica vaginalis, and the cord was rather thickened and the skin of the scrotum red. There was no appearance or history of urethritis; no evidence or history of syphilis. The temperature at night varied from 101° to 103°, and in the morning was about 99°. No definite evidence of any other tubercular lesion could be discovered in the body. At the present time the disease had extended to the body of the testicles on each side, and the enlargement was steadily increasing. The left testicle was the size of a small fist, and both were very tender. The patient was advised to have double castration performed (after exploratory incision) for two reasons—viz., the disorganised condition of the testicles rendering them functionless, and the danger of general infection and of extension to the base of the bladder. Operation was declined.

Retroversion of the Gravid Uterus.—Dr. PURSLOW read notes of a case of retroversion of the gravid uterus. The patient, who had had four children and no miscarriages, was admitted at 6 P.M. on Nov. 14th, complaining that she had been unable to pass urine from noon on the previous day; no other symptoms. Last menstruated on Aug. 1st. On examination the bladder was distended, reaching to umbilicus, and there was a well-marked retroversion of uterus, the os being high up behind the pubes, and the fundus forming a large doughy swelling in posterior part of the pelvis. After withdrawing urine an attempt was made to replace fundus by pressure of fingers in vagina and then in rectum, but this did not succeed. The patient was then placed in genu-pectoral position, and the uterus righted itself, and there was no further trouble. Dr. Purslow urged the importance of trying replacement in genu-pectoral position before proceeding to give an anæsthetic.

Biliary Calculus.—Mr. CHRISTOPHER MARTIN showed a biliary calculus removed ten days previously by Mr. Lawson Tait by the operation of cholecystotomy. The patient was a middle-aged woman who had suffered from repeated attacks of biliary colic during the preceding three months. Each attack was followed by violent bilious vomiting, but never by jaundice. She had never found gall-stones in the fæces, nor had the stools been pale in colour. On examination the gall-bladder was found to be greatly enlarged, reaching to two inches below the umbilicus. It formed a smooth fluctuating mobile swelling the shape of a soda-water bottle. At the operation it was found to be distended with a clear, colourless mucous fluid, in which not a trace of bile could be discovered. There was but one stone, and this was impacted in the neck of the gall-bladder. It was about the size and shape of a nutmeg, and remarkably tuberculated on the surface. The patient was making an excellent recovery.

Mr. ROSS JORDAN read a paper on the Lunacy Act of 1890, and the certification of lunatics.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Mr. A. R. ANDERSON, F.R.C.S., President, in the chair.

THE meeting on Jan. 6th was a Clinical and Pathological evening.

Mr. TRESIDDER showed a boy on whom he had removed a piece of the cartilage of the ear for the remedy of out-standing ears.

Mr. GERATY described the case of a man aged sixty who suffered from Multiple Sarcomatous Tumours. When first seen there was only one nodule on the forearm. This was excised, and soon afterwards superficial nodules appeared on the trunk and face. Many of these had a purpuric zone round them. Some small nodules were observed to diminish in size and ultimately disappeared, while fresh ones continued to appear. The patient suffered no pain, but became weak and anæmic-looking. He died a year after the removal of the original tumour.—Dr. W. H. RANSOM followed with remarks on the spontaneous recession of Sarcomata. He remarked on the rarity of this occurrence, and mentioned instances of it in medical literature and coming within his own knowledge. He also alluded to cures of sarcoma which have been reported under the use of arsenic, the iodides, and mercury. There were three varieties of nodule in Mr. Geraty's case: (1) A patch of discolouration not raised above the surface in which blood-corpuscles were found, but no sarcoma cells, although they were probably present; (2) extravasation of blood into a sarcoma nodule provided with limiting capsule; (3) infiltrating growths without capsule. He considered the essential cause of recession of the growths was hæmorrhage, the effect of which was to destroy the vitality of the cells and render the mass capable of absorption.—Dr. HANDFORD found arsenic useless in lympho-sarcoma infiltrating the neck.—The President and Dr. Boobbyer also spoke.

The PRESIDENT reported two cases in which he had successfully removed large Tumours from the gluteal region. Both occurred in women. In one the growth proved microscopically to be a myxo-fibroma; it was about the size and shape of a Rugby football. In the second case, a small lump which had existed for many years began suddenly to enlarge, and at the time of operation had attained the size of a child's head, on weighing removal 5 lb. A microscopic section, prepared by Dr. W. H. Ransom, showed the tumour to be an atheromatous cyst undergoing sarcomatous degeneration. Islets of sebaceous cells were to be seen amongst the sarcomatous tissue. He also referred to (1) a case of pure adenoma of the breast, a microscopic section of which was shown, and commented on the rarity of this growth; (2) a case of carcinoma uteri which he had successfully removed by vaginal hysterectomy; and (3) a case of melano-sarcoma of the ciliary region with cataract.

Mr. TRESIDDER related the case of a man, aged seventy-one, who had been ill eleven days, and was admitted into the hospital with symptoms of obstruction. Laparotomy was done, and the man died. A specimen was shown of the cæcum surrounded by an abscess cavity in which lying free were the appendix and a foreign body.

Mr. TRESIDDER also showed specimens of Gastro-enterostomy. The operation was unsuccessful, and was performed on a patient already much weakened by cancer of the pylorus of seven months' duration. Duodenal ulcer had been diagnosed during life, and Mr. Tresidder discussed the difference between gastric and duodenal ulcer. Death occurred from hæmorrhage. The size of the ulcer was an inch and a half by half an inch.

Specimens.—Mr. ANDERSON: Tumour of Buttock; Uterus removed for Carcinoma; Sarcoma of Ciliary Region; Adenoma of Breast.—Dr. W. H. RANSOM: Sarcomatous Testicle; Microscopical Sections of Sarcoma, Myxo-fibroma, Spindle-celled Sarcoma, and Adenoma of Breast.—Mr. CLEMONS (for Mr. Anderson): Sarcoma of Ciliary Region.—Dr. CATTLE: "Fuchsine Bodies" in Carcinoma, which were considered due to the deep staining of globules of degenerated protoplasm; Sections showing development of Mammary Carcinoma from the Epithelium lining the Alveoli.

Reviews and Notices of Books.

An Introduction to Human Physiology. By AUGUSTUS D. WALLER, M.D., Lecturer on Physiology at St. Mary's Hospital Medical School. London: Longmans, Green, and Co. 1891.

IN this work, which we gladly welcome from so excellent a teacher, Dr. Waller presents what in his judgment are the chief points in physiology that should be understood by the medical student. The arrangement adopted by Dr. Waller is to consider in the first place the phenomena of nutrition, including the blood circulation, respiration, digestion, secretion, the balance of the economy and animal heat; and in the second part the phenomena of excitation, including the nervo-muscular apparatus and senses. Each chapter is preceded by a syllabus of the subject, which may be of use not only to the student but to the teacher, by showing the order in which the subjects treated of are discussed. The first one, under the head of Circulation, is particularly full, and gives the page on which each point is treated. In this chapter we notice an instructive woodcut giving the duration of systole and diastole, with different pulse frequencies, showing that the systole shortens by about two one-hundredths of a second for each increase of ten beats per minute, and that the diastole shortens by about ten one-hundredths of a second. The nature, mode of determining and variations of blood-pressure are well and clearly given, but call for no special notice. The author estimates the quantity of blood discharged from the heart into the arteries at each systole at four ounces.

The chapter on Respiration contains a drawing of an ingenious and handy little apparatus for determining the quantity of oxygen and of carbonic acid gas in expired air. In regard to ventilation, he observes, the air of a room in which respiratory CO_2 does not exceed 2 per 10,000 is fresh, when the respiratory CO_2 is between 2 and 4 per 10,000 the room begins to feel close, between 4 and 6 per 10,000 it is

decidedly close, between 8 and 10 the air is foul, and beyond this limit intolerable for any length of time; 2 per 10,000, or 1 per 5000, is thus the limit of expired CO_2, admissible in perfect ventilation, and should never be exceeded. The term "respiratory CO_2" does not seem to us to be a happy one, and the student is apt to forget that four parts per 10,000 have to be added to each of the above numbers to represent the quantity present in ordinary air. The mode of calculating the quantity of fresh air required for good ventilation is well put: "Remembering that every 1 cc. of expired CO_2 is to be diluted by at least 5000 cc. of fresh air, an adult expiring fifteen times per minute 500 cc. of air containing 20 cc. of CO_2 exhales in one hour 18 litres of CO_2, which to be diluted 5000 times requires 90,000 litres of air—i.e., the fresh air required during the hour is 90,000 litres, or 3000 cubic feet." This is the normal amount of fresh air per head per hour which should be provided for in the ventilation of dwellings intended to be "healthy." The author points out that the waxing and waning of the respiratory rhythm characteristic of the Cheyne-Stokes respiration stands in some relation to the Traube-Hering rhythm in the vaso-motor system, for both rhythms are originated by medullary centres, and are of about the same frequency—viz., 1 to 3 per minute, the association being sometimes most definite and exact; in the rabbit, for example, after hæmorrhage phases of increasing and diminishing amplitude of respiration, coinciding with rise and fall of blood pressure; they are instances, among many others, of the common tendency towards pulsatile or rhythmic action manifested by all living matter. A very good section is devoted to the respiration of muscle as illustrating internal respiration, and much information not to be found in other works on physiology is given in regard to the formation of CO_2 by muscle, showing that in contraction, after death and at 40°, muscle yields CO_2 and becomes acid; at 70°, although it becomes rigid, it does not yield CO_2 or become acid, whilst at 100° it yields CO_2 and becomes acid.

Incidental remarks often suggest that Dr. Waller is a practical physiologist, and has made the experiments he describes. For example, after remarking that after severance of the head of an animal a little salivary secretion can be induced by stimulating the chorda tympani, he adds: "The observation is less convincing in the fact than in the account of the fact—only a drop or two of saliva can thus be obtained,—and room is left to imagine that this minute quantity is squeezed out rather than secreted." Intestinal juice he regards as having only a very slight digestive action on food stuffs, its most characteristic effect being the conversion of cane sugar or saccharose into invert sugar or lævulose and dextrose, by virtue of the ferment named "invertin." Glycogen he regards as a temporary carbo-hydrate reserve. Absorbed sugar, he says, enters the blood, is to a great extent stored as glycogen in the liver, is consumed by living muscle, and is discharged as CO_2, and as H_2O.

The chapter on Digestion is short, though no fact of cardinal importance is omitted. The time occupied for a complete act of deglutition is given at from 17 to 19·5 seconds for man. This period appears to be extraordinarily protracted. Surely it does not occupy more than a quarter of a minute for a bolus of food to reach the stomach. In regard to the vexed question of the termination of nerve fibres in the cells of salivary glands, Dr. Waller only remarks that all attempts at the demonstration of the junction have been unconvincing. He gives a very full and good account of the alterations observed in the cells of serous and mucous glands respectively in the resting and active state.

In the chapters on Muscle and Nerve a brief histological introduction is given, which is preceded by a very useful section on electro-physiological instruments. The meaning of the terms ordinarily employed in research, such as ampère, ohm, volt, rheostat, rheocord, Wheatstone's bridge, commutator, galvanometer, and others, are explained more clearly than we have elsewhere seen, and are accompanied with rough diagrammatic but very intelligible figures.

Under the head of the Spinal Cord and Bulb, Dr. Waller gives a short description of the structure of the cord, with a cut showing the arrangement of the columns in transverse section. Another woodcut gives an ideal longitudinal section, and showing that Clarke's column and the intermedio-lateral tract are rather to be regarded as islands of grey substance than as columns, and showing also the relations of these islands with the cervical sympathetic and cardiac accelerator nerves and with the splanchnic nerves. In regard to the *quæstio vexata* of the course of the motor and sensory fibres, after pointing out the inconsistency of the generally accepted doctrine that the motor fibres cross at the bulb and the sensory fibres in the cord, he remarks, "We seem, in fact, to be approaching the conclusion that sensory as well as motor channels have their major decussation in the bulb, their minor decussation in the cord; in which case we must admit that sensory impulses from each side of the body can pass up both sides of the cord, but most on the same side." He takes exception to the expression "centre for" such-and-such an action, considering that it implies a mapping out of the bulb and cord into departments far more definite and artificial than in reality exists, and is an illegitimate dictation of final causes. It appears, however, to be only a convenient mode of saying that a certain anatomical region from which nerves supplying one or a number of muscles take origin, and most teachers probably explain this in speaking of such centres.

The difficult subject of Cortical Localisation is sensibly and temperately discussed. The balance of evidence, the author thinks, is in favour of localisation, whilst the counter-evidence has shown that localisation is not sharply defined but blurred; and he suggests as an analogy that the various activities of the brain are not generally distributed as in a country without towns, where all kinds of industry go on in every hut, nor are the different activities absolutely restricted to certain spots, as if in walled towns. "The brain cortex is not comparable with either of these extreme cases; its territory must be recognised as possessing towns with special industries, but towns with straggling and overlapping suburbs, and industries which are indeed predominant each in a given centre, but not exclusive of all other industries in that centre, nor excluded from other centres in which other industries predominate." This appears to express very happily the conditions existing in the brain cortex.

The limits of the space at his command and the belief that the subject is beyond physiological bounds have led him to deal very summarily with the development of the embryo. Only an outline of the earliest stages is given.

We have quoted enough to show that Dr. Waller has written a very serviceable manual for the student, and one which may be regarded as well up to date. The author has had large experience in teaching, is at home in the laboratory, familiar with the use of instruments, and very competent to estimate the value of physiological experiments and doctrines, and their bearing on clinical medicine.

OUR LIBRARY TABLE.

Journal of the Marine Biological Association of the United Kingdom. Vol. ii., No. 2, Nov. 1891. London: Dulau and Co.—From this journal we gather that Professor E. Ray Lankester has been elected President in place of Professor Huxley, retired. The receipts, including a

small charge for admission, have been £1925 5s. The condition of the tanks is annually improving, and a self-sown fauna of hydroids, ascidians, and chætopods is slowly springing up. Eleven gentlemen have occupied tables in the laboratory. Attempts, not hitherto successful on account of the difficulty of obtaining a suitable situation at a reasonable cost, have been made to obtain ponds for the artificial rearing of soles and of lobsters. So many anchovies were brought to the laboratory last year of large size that an anchovy drift-net has been purchased, and it is hoped that a regular fishery may be established. The papers contained in this part are: 1. The Egg and Larva of Callionymus Lyra, by J. T. Cunningham, and, by the same writer, Experiments on the Production of Artificial Bait; also the Rate of Growth of some Sea Fishes and their Distribution at different Ages; the Reproduction and Growth of the Pilchard and the Development of Palinurus vulgaris or Sea Cray Fish. 2. Walter Garstang on some Ascidians from the Isle of Wight. 3. Physical Investigations, by H. N. Dickson.

La Neurasthénie. Par le Dr. FERDINAND LEVILLAIN. Paris: A. Maloine. 1891.—Dr. Levillain's work is sandwiched between the inevitable preface by Charcot and a paper by another writer. The work itself is a very full one, and the subject is discussed in a manner which shows that the author has a thorough grasp of it. He begins at the very beginning by giving a history not only of the thing itself, but also of its name, and, after a rapid discussion of its nature and etiology, the bulk of the book is devoted to a full account of the symptoms and objective signs of the malady. Prognosis and diagnosis are also discussed, the subject of treatment in its various forms is entered into with the necessary amount of detail, and the book is rendered very complete by an appendix, in which the medico-legal aspects of neurasthenia are discussed. A very complete bibliography, which is sure to be useful, is also added.

La Suisse: Balnéaire et Climatérique. Par Dr. EUGÈNE DE LA HARPE. Zurich: César Schmidt.—Dr. de la Harpe's little book treats of the various Swiss health resorts in an exhaustive and scientific manner, and contains many valuable hints as to the class of patients for which each health resort is suitable. In addition to the already well-known "cures," Dr. de la Harpe brings into notice some places as yet little known. Among them Arosa may be mentioned, and Weissenbourg. Arosa may be reached from Coire and Langivies; from the latter place the journey is short and easy. High mountains surround it on three sides, and it stands at an altitude of 1900 metres, the north-west side alone being open. The scenery is grand and of a severe character, with forests of pines on the southern side, and there are several small lakes. The climate is bracing, subject to rather rapid changes of temperature, but as a rule the air is very dry. The climate in winter is as yet imperfectly known, since Arosa has only been used as a summer resort. The great attractions of Arosa are the purity of the air and the absence of dust. Dr. de la Harpe recommends it for patients in the early stages of phthisis. Weissenbourg, which is three hours and a half from Thun, is noted for its sulphuretted lime and magnesia waters. The baths of Weissenbourg are situated in a narrow valley watered by the Bunschenbach. The sides of the mountains which enclose the valley are covered with pines. The air is pure and free from dust, and the smell of the pines very pleasant. The chief characteristic of the climate is the dampness of the air, due to the large forests round the valley; it is also variable. Invalids are subjected to a strict regimen with regard to diet and alcohol. The best results are said to be obtained in tuberculosis of the larynx and in the sequelæ of inflammatory diseases of the lungs.

The Johns Hopkins University Circular, Vol. XI., No. 93, is devoted to the full text of the addresses delivered at a meeting held in the Physical Laboratory of the University on Oct. 13th to celebrate the seventieth birthday of Professor Virchow. The addresses are remarkable for the genial and lofty spirit which animates them, and the warm recognition they give to the life-long labours of the illustrious pathologist. Professor William Osler speaks of "Virchow, the man and the student"; Professor William Welch of "Virchow, the pathologist"; and more general tributes are contained in the addresses of Professor Samuel C. Chew, of the University of Maryland; of Professor A. Friedenwald, of the College of Physicians and Surgeons, Baltimore; and Professor A. Jacobi, of the College of Physicians and Surgeons, New York City. The celebration was one which did honour to those who shared in it, whilst it showed the gratitude that the followers of medical science in the New World bear to the inspiring work of their master, Virchow.

Analytical Records.

VARIOUS SOAPS.

(PRICE'S PATENT CANDLE COMPANY, LIMITED, LONDON AND LIVERPOOL.)

SOAPS are amongst the excellent productions of this well-known firm, no less than six kinds having been submitted to us for examination. The statements made in reference to each and all are, according to our analyses, quite accurate. Thus Regina is a dehydrated soap, milled and free from excess of alkali; Bonne Mère Nursery Soap is admirably fitted for the purpose implied by its name; Glycerine Cream is desiccated, milled, and extra perfumed; and Bath Soap is a cheap but none the less good variety freed from all irritant matter. The list would be incomplete without Sanitary soaps, and the two specimens sent us are so designated from the fact of the one containing eucalyptol and the other carbolic acid, both in conjunction with glycerine. The moisture in all samples varied from only 5 to 6 per cent., the combined alkali from 9 to 10 per cent. There was no evidence of free alkali, nor was any substance detected which should not properly enter into the composition of good and well-prepared soap.

DEVONSHIRE CONFECTIONS.

(JOHN CLEAVE & SON, WEST OF ENGLAND STEAM CONFECTIONERY WORKS, CREDITON, DEVON.)

More need not be said than that these confections are made of the purest materials; and where colour had been used it proved to be on analysis of a harmless character. Of the varieties sent us the following are types:—Lorna Doone, a toffee said to be made from clotted cream; Cream Almond Rock; Chocolate Almond Nougat and Devonshire Cream Butter Scotch—all were of excellent flavour.

SALIPYRIN (TABELLÆ AND CACHETS).

(ALLEN & HANBURYS, PLOUGH-COURT, LOMBARD-STREET, E.C.)

As its name would indicate, salipyrin is a compound of salicylic acid with antipyrin; it contains 42·3 per cent. of the former and 37·7 per cent. of the latter body. Salipyrin is a white crystalline powder, free from odour, slightly acid and astringent to the taste, sparingly soluble in water, but readily so in alcohol. On heating on platinum foil it burns with luminous smoky flame and leaves no residue. The substance, we find, melts in a test-tube and gives off a small crystalline sublimate, while a smell of phenol and oil of winter-green is distinctly perceptible. Perchloride of iron gives, as with salicylic acid, an intense violet colour, and acetic acid and sodium nitrite, an emerald-green

colour distinctive of antipyrin; it is evidently, therefore, a loose compound. The production of salipyrin was the outcome of a suggestion to combine the antifebrile and analgesic properties of the base antipyrin with the anti-rheumatic action of salicylic acid. It is therefore very probably of value in cases where either or both drugs are indicated. Salipyrin has been largely employed in the treatment of influenza on the Continent, and we have recently learned of gratifying results following its administration at home.

THE PERFECTED COD-LIVER OIL EMULSION WITH HYPOPHOSPHITES OF LIME AND SODA.

(ALLEN & HANBURYS, PLOUGH-COURT, LOMBARD-STREET, E.C.)

This preparation is a well-made emulsion. It is quite tasteless as regards cod-liver oil, and possesses a very agreeable flavour. Under the microscope could be seen numerous and uniform-sized oil globules. Water dissolved out hypophosphites, and their presence was recognised by characteristic reactions. With zinc and sulphuric acid, for example, a gas was obtained smelling of phosphuretted hydrogen, and burning with a green-tinged flame. Sulphuric acid mixed with the emulsion produced a deep crimson colour. The preparation is doubtless a valuable one, and one which, as it yields highly satisfactory analytical results, we are glad to bring before the notice of the profession.

ESSENTIAL OIL OF EUCALYPTUS AND EUCALYPTOL.

(THE DOWNIE B. I. P. COMPANY, SAN FRANCISCO, 4, REDCROSS-STREET, LIVERPOOL, AND 80, BILLITER-SQUARE BUILDINGS, E.C.)

Eucalyptus is no new thing, but eucalyptus oil as a bye-product is a decided novelty. It appears that the above company discovered that a strong decoction of eucalyptus leaves is effectual in softening hard water for steam-making purposes and for preventing boiler incrustations. Eucalyptus decoction is said to offer distinct advantages over the ordinary "boiler compounds" at present in use—caustic alkali, for example. It is claimed to be, for instance, without action on iron. In the preparation of this extract the oil is of course obtained as a bye-product, and as such it compares, judging from our examination, most favourably with the specially obtained kinds. The specimen of eucalyptol commenced to boil, we found, at 160° C., and the whole distilled over at 170°. The specific gravity at 15° C. was 0·897. On evaporation a small residue remained. The essential oil distilled over between 170° and 180° C., and had a specific gravity at 15° C. of 0·906, and yielded a slight resinous residue on evaporation. Nitrous acid produced no reaction to indicate the presence of phellandrene. Both products are clearly of excellent quality.

PULVIS KUTNOVII ANTI-ASTHMATICUS.

(S. KUTNOW & CO., 66, HOLBORN VIADUCT, E.C.)

We have met with not a few preparations similar in substance to the above, which are offered as of value for the relief of asthma, bronchitis, &c. It consists of a dried herb of pleasing aroma, impregnated with a deflagrating mixture. The powder slowly deflagrates with scintillation when lighted, and gives off an abundance of smoky fumes. We cannot speak from clinical experience of its value; but as our examination shows that it is carefully prepared and contains ingredients of a selected kind, it may be deemed worthy of trial.

IODOPYRIN.

(BURROUGHS, WELLCOME, & CO., SNOW-HILL BUILDINGS, E.C.)

It may be of interest to record the following reactions yielded on experimental examination of this interesting compound. Heated in a tube, it melted, turned brown, and finally gave off violet vapours of iodine. The residue on cooling emitted a distinct odour of almonds. Chlorine displaces the iodine, as on the addition of the solution of this gas in water and a little starch emulsion a blue colour was produced. Carbon disulphide, too, dissolved out iodine on addition of chlorine water. No reaction could be observed when sodium nitrite, together with acetic acid, were added; but on boiling for some time with chlorine water, and then adding these reagents, the emerald-green colour characteristic of antipyrin was obtained. Iodopyrin, as its name implies, is a compound of iodine with antipyrin, and is represented by the formula, $C_{11}H_{11}N_2IO$. It is slightly soluble in cold water and alcohol, readily in hot, is tasteless and without odour. This interesting product, first prepared by Dittmar, is stated to be effectual in rapidly lowering the temperature and in promoting diaphoresis. In the stomach it is most probably decomposed into iodine and antipyrin.

LIGHT DINNER ALE.

(GOODMAN & YOUNG, STAMFORD-HILL BREWERY, STOKE NEWINGTON, N.).

The demand for palatable malt liquors, less full and less heavy in character, appears to be growing in this country. Light bitter beer has to a great extent replaced the once favourite heavy Burton or fourpenny ale, while lager beer has rapidly gained ground as a refreshing and wholesome beverage, especially during the summer months. The light ale under notice was found to resemble in composition, though not in flavour, ordinary lager beer. Thus, analysis showed 3·82 per cent. absolute alcohol by weight and 3·85 per cent. malt extract. (The well-known Munich beer contains 3·80 per cent. alcohol and 3·90 per cent. extract.) Malt and hops enter solely into the composition of the ale, and it seems well adapted for table use. *Apropos* of this subject we are prompted to ask why brewers generally have not succeeded in placing in the market an article equally refreshing and palatable as lager beer, and one that is calculated to quench thirst without producing muddled brains? Light beers, however, are more prone than the heavier kinds to turn sour or lose condition, and this probably has been the objection to their general production.

FAREWELL DINNER TO PROFESSOR SHERIDAN DELÉPINE.—On Saturday evening, the 23rd inst., a farewell dinner was given in the Café Royal, Regent-street, to Dr. Sheridan Delépine, on the occasion of his leaving London to fill the post of Professor of Pathology in Owens College, Manchester. Between fifty and sixty of Dr. Delépine's colleagues and friends were present. The chair was occupied by Dr. Dickinson, who had on his right the guest of the evening, and on his left Sir Andrew Clark, Bart., President of the Royal College of Physicians. Amongst others were present Dr. Lauder Brunton, Dr. Klein, Dr. George Harley, Dr. De Watteville, Prof. Anderson Stuart of Sydney, Dr. Woodhead, Prof. Victor Horsley, Mr. Watson Cheyne, Dr. William Hunter, Dr. Rolleston, Prof. Halliburton, Dr. Mott, Dr. Sherrington, and Dr. Sidney Martin. The chairman, in proposing the health of the guest of the evening, spoke in warm terms of the excellent work Dr. Delépine had done in London, and of the promise that he gave for the future. Whilst regretting his loss most deeply, it could not but be felt by all those present that the transition to Manchester would give him opportunities which he had not hitherto had, and of which he was sure Dr. Delépine would avail himself to the full, and he with all those present wished him and those dear to him all happiness in his future home and sphere of work. Dr. Delépine, in reply, spoke of the great kindness that he had always received from his colleagues, and of the heartiness of their support not only in his recent candidature but at all times. During the evening Dr. Lauder Brunton proposed the toast of "The Progress of Pathology," which was well received, and was replied for by Prof. Victor Horsley and Dr. G. S. Woodhead. Sir Andrew Clark proposed the health of the chairman, a toast which was cordially received. The remainder of a very pleasant and sociable evening was interspersed with songs and stories, which were highly appreciated.

THE LANCET.

LONDON: SATURDAY, JANUARY 30, 1892.

A MEMORANDUM has just been issued by the Local Government Board upon the precautions which are advisable at times when epidemic influenza threatens or is prevalent. It will be remembered that in July last an exhaustive report, prepared by Dr. PARSONS, on the epidemic of 1889-90, was issued by the Local Government Board, together with an introduction by Dr. BUCHANAN; and it was then explained that since effectual action for the prevention of disease must be based on a knowledge of its causation, and since but little was known of the natural history of influenza, advice as to its prevention must necessarily be very incomplete. It is admitted that this lack of information still very largely obtains; and it is significant that though influenza has prevailed in most parts of the world, no authoritative counsel as to its means of prevention has been published by any State.

In view, however, of the recurrence and maintained prevalence of the disease, the Board evidently feel that there may be advantage in setting out in a form easily procurable by the public a brief summary of those points as to which certain definite knowledge has been obtained. It is in the first place laid down that influenza is spread by infection from person to person. The report issued by Dr. PARSONS contained abundant evidence on this point; and Dr. BUCHANAN, reviewing this evidence, and admitting that the infection may possibly travel by some less direct means, expressed the opinion that in its epidemic form influenza is an eminently infectious disease, and that there can henceforth be no doubt about the fact. Circumstances constantly coming within our knowledge show that this important point is most imperfectly appreciated by the public, and we think that the quotations from Dr. BUCHANAN'S introductory chapter, which are embodied in the new Memorandum, will usefully draw fresh attention to the fact. One of the reasons why aerial diffusion, apart from human agency, has been so commonly regarded as accounting for outbreaks of the disease, has been the circumstance of the rapid spread of the infection simulating the operation of a single cause simultaneously on all who were attacked. On this point Dr. BUCHANAN has called attention to the fact that influenza having something like a third part of the incubation time proper to small-pox, measles, or typhus fever, it has correspondingly rapid ability to reproduce itself, and that it can thus give rise to some thousand attacks in the same time that small-pox or typhus fever would produce ten, each of the thousand cases being ready to infect other susceptible people.

This circumstance, and the absence of any such definite symptom as a rash—like that which accompanies some of the ordinary specific fevers,—tend still further to prevent the early and certain recognition of the complaint; and the consequence is that such preventive action as is practicable is often deferred until the cases have multiplied and the infection has already spread beyond control. These various considerations having been set forth in the memorandum by way of prelude, it is then explained that notwithstanding these difficulties, which stand in the way of the application of proper precautionary measures to the general population and to the breadwinners of a community, there still remain some circumstances under which certain preventive measures may be applied to certain classes of persons; notably to persons in whom an attack would be specially dangerous by reason of age or infirmity, to inmates of institutions whose mode of life can be regulated, and to first attacks in households, and even in certain localities. Amongst these measures isolation stands foremost, and it is stated that measures to maintain separation between the sick and the healthy have in some instances been adopted with marked success. The methods in which the isolation is to be applied must necessarily vary, and it must be admitted that isolation in hospital by sanitary authorities can hardly be contemplated. Next to isolation the disinfection of infected clothing, of other articles, and of rooms is advocated. It is also urged that persons suffering from influenza should not expose themselves in public places.

By way of guide in the carrying out of these measures we may recall the fact that, according to Dr. PARSONS' report of last year, evidence has for some time past been available to the effect that the disease is infectious at quite an early stage, and that it may remain so as late as at least the eighth day from the attack; and it is now added that evidence to this effect has since accumulated. These points deserve consideration in connexion with a further recommendation that the assemblage of large numbers of persons in a confined atmosphere should be avoided. The incidence of the disease on members of the House of Commons, on the inmates of certain institutions, and on persons shortly after attendance at crowded meetings of various sorts must be within the knowledge of most people; and it should be remembered that in persons ill-fitted to withstand the disease even ordinary aggregations might properly be avoided during periods when influenza threatens or is prevalent.

A second point to which prominence is given in the memorandum is that the liability to contract influenza, and the danger of an attack, if contracted, are increased by depressing conditions, such as exposure to cold, or to fatigue, whether mental or physical; and advice follows as to the maintenance of a good standard of health, as to the wearing of clothing of suitable warmth, and as to the taking of wholesome food. The need for restoratives at a certain stage of the disease has led some to resort to alcohol as a mere preliminary preventive. This is as great a mistake as the sudden abandonment of a reasonable and customary amount of alcohol. As the result of the former practice, not only does this stimulant become of little avail at a time when it might be otherwise helpful, but the power of resistance to the infection is distinctly lessened in advance by any improper and exceptional resort to stimulants; and hence the memorandum, in dealing with precautionary measures, utters a timely warning against anticipating influenza by any excessive use of alcoholic liquors. Advice is also given with a view to the avoidance, amongst those

attacked, of the pulmonary complications which constitute a chief danger of the disease. Thus it is especially urged that those suffering from influenza should studiously avoid anything which involves exposure to cold or fatigue; and a final caution is issued to the effect that persons who find themselves attacked by the malady should not attempt to fight against it; but should, on the contrary, seek rest, warmth, and medical treatment.

Some of our contemporaries have recently been urging the Government to give advice to the public as to the proper treatment of the disease. But this has never been a function of the health department of the State in this country, a department which has concern with the prevention of disease and with the maintenance of the health of the public, not with the medical treatment of individuals, a matter which must remain the duty of those who, by actual observation of the sick, can alone judge what are the remedial measures called for in one and another patient. Holding this point in view, the document concludes with the statement that the nature of the treatment of cases of influenza does not fall within the scope of the memorandum.

THE trial STEELE *v.* SAVORY was held on Tuesday and Wednesday last before Mr. Justice ROMER, when, as our readers will perceive from the report of the proceedings which appears upon another page, the plaintiffs claim was disallowed and the relief sought refused, while the position taken up by the Council of the College was vindicated upon all the points brought into issue in the proceedings. It is therefore a matter of some moment that the issues involved, and consequently the effect of the decision reached, should be clearly understood; for it cannot be hoped that the action in the Chancery Division will set at rest the controversy of which it was but an outgrowth, and it is therefore desirable that its bearing upon any future discussion should be clearly and accurately apprehended. The substantial question tried, as we understand it, was—Have the members, in spite of By-law xvii., any right to meet in the hall of the Society which does not depend for its exercise upon the approval of the governing body of the College, and which it would be a breach of duty on the part of the Council to deny? The larger question, which has been the subject of annual discussion since 1884, is a question not of what is, but of what ought to be, the measure of the Members' rights. This, however, is a question upon which no court of law or of equity has jurisdiction to enter. It occurred a few months since to some of those who have stood in the forefront in this dispute that it might be possible to make out, not merely that Members had an abstract right to an increased share in the administration of the College, but also that they had a legal claim to some part—a small but still a substantial part—of the enlarged functions which they desire to exercise. They took steps to assert this claim, and by a course of conduct fully justified upon their own view of their rights, but unwarranted upon the view which the Council took of the same matter, they placed themselves in a position which compelled the Council to deny their claim, and then proceeded to assert it by legal means. The claim which thus became the subject of contention was a claim to use the College hall for the purpose of a meeting to discuss College affairs. It was formulated by the counsel who appeared in support of the Members' case as a claim of the right to the reasonable use of the hall of the College for all proper corporate purposes. The contention, on the other hand, was that the only purposes for which it could be used by members were purposes of which the Council of the College had signified approval. There, reduced to its smallest compass and most concrete form, lay, as we understand it, the whole matter in debate in the Chancery Court.

The right so contended for is of itself a matter of very great importance regarded from either point of view, but its inherent importance was strictly subordinate to that of the principles upon which it was determined. Without attempting to repeat or even to recapitulate the argument which is summarised in our report, we may indicate that in behalf of the Members it was asserted not only in opposition to the by-law, but also, if necessary, in opposition to the Charter under which the College is incorporated, on the ground that it had been given by Act of Parliament, and could not be taken away by anything less than a repealing Act. It was in view of this contention that the ancient history of the surgeon's craft in London was elaborately set out in the statement of claim. This contention was, however, met by a recital in the Charter, under which all the subsisting Members have indisputably been admitted, to the effect that the company to which these grants were made by the Act of Parliament had become dissolved. In the course of this discussion the curious position was reached in which the malcontent Members were contending for the antiquity of the College, while its governing body was saying, on the other hand, that it was an institution of recent creation which came into existence only in the year 1800. In the end, the view advanced by the governing body was adopted by the Court, and the College held to have taken its origin from the Charter of GEORGE III. The rights, therefore, which members of the Surgeons' Company might have claimed were held not to enure for the benefit of Members of the existing College, who are thrown back upon their own charters. Upon a consideration of these documents the Judge arrived at the decision that there was power in the Council to make the by-law that had been impeached, and power also to enforce its observance by the sanction of expulsion. It is therefore clear that, upon the basis of the law as laid down by Mr. Justice ROMER, the plaintiff Members of the College have much overstated their legal rights. The object of their desires is not to be sought at the hands of the judicature, and although the decision reached on Wednesday last does not in any way touch the merits of the controversy, it goes to show that in this dispute the Council are not aggressors, maintaining ground which they have occupied without the warrant of a title to the position, but that, on the contrary, they are merely defending a legally sound position, and that if any change is to be hereafter brought about in the status of the Members, it must result from legislative action. The Crown has already refused to confer a fresh Charter in opposition to the wishes of the governing body, and the reason is doubtless a perfectly valid one. But Parliament

can listen to any complaint, from whomsoever emanating. It is possible, and we should be glad to think that the fact would be so, that both parties may after this episode be disposed to resume the discussion with an enhanced desire to arrive at an agreement. If that could be effected, there seems to be no room for doubt that any settlement which might be adopted by consent would easily receive the necessary authorisation, and so acquire the force of law.

As will be seen, we have in the above remarks simply set forth the matter from the legal point of view; its professional aspect must be dealt with in another article. We understand that the case may not improbably be taken to a higher court.

DIABETES has long been a favourite field of investigation for the physiologist and pathologist as well as for the physician. The remarkable perversion in the normal process of nutrition which this malady exhibits has done much to rivet attention and to lead to frequent inquiries into its precise pathogeny. The flood of light shed upon the subject by the revelation of the glycogenic function of the liver—to which CLAUDE BERNARD and PAVY contributed so largely—and the striking discovery by the first-named of the production of glycosuria by puncture of the fourth ventricle, have served to point the way to many fresh lines of research and to suggest the direction in which the causative conditions of the disease may perhaps be found. Nevertheless, in spite of all this labour, full and fruitful as it has been, there has remained behind a sense of something still to be discovered before the true explanation of diabetes can be attained. It is something to have conceived of glycosuria, as apart from diabetes, but the various types of the disease itself seem to demand a more thorough analysis than has hitherto been attempted. The revival within the past year or two of the notion that the pancreas may be the organ at fault is one indication of the indeterminate state of the subject. That this notion is a revival of an old doctrine must, we think, be admitted. Long before anything was known or suspected of hepatic glycogenesis morbid anatomists had from time to time observed manifest organic changes in the pancreas of diabetics. These changes comprised conditions of atrophy and fatty degeneration, of induration and chronic inflammation; but their frequent absence led them to be considered less as causal conditions of the diabetic state than as coincidents. Still, the concomitance seemed to be too frequent to be merely accidental; and unless it could be shown that the changes in the gland were really secondary to the general nutritional disorder, it was fair to surmise that they might have some share in the production of the latter. It was M. LANCEREAUX who first formulated this idea of a "pancreatic" as distinct from a "hepatic" diabetes, and averred that the former was characterised by a more rapid course, with extreme emaciation, than the ordinary class. Nearly twenty years ago, at the London Pathological Society, the late Dr. SILVER exhibited a specimen of extreme fatty degeneration of the pancreas from a case of diabetes,[1] and mentioned that of thirty examinations of diabetics ROKITANSKY had found this organ diseased in thirteen; and at the same meeting Mr. COUPLAND mentioned his observation of an extremely cirrhosed condition of the pancreas in a case of diabetes and phthisis.[2] These and similar observations are, however, comparatively isolated, and even the subsequent discussion at the same Society upon the morbid anatomy of diabetes[3] failed to elicit much information; but in his more recent Bradshawe lecture Dr. SAUNDBY showed that in many cases there was some reason for associating the morbid changes found in the pancreas with diabetes.[4]

The evidence in favour of a pancreatic form of diabetes as afforded by morbid anatomy does not appear to be conclusive, but when taken in conjunction with recent experimental data, it gains greatly in importance. Extirpation of the pancreas is, from the position and relations of the organ, an operation of considerable difficulty and danger, and the earlier experiments by BERNARD and others gave no satisfactory result. It was, however, determined that mere ligature or occlusion of the pancreatic duct had no effect so far as regards the production of glycosuria. In 1889 Drs. MINKOWSKI and VON MERING reported to the Medical Congress at Heidelberg the results of their experiments on ablation of the gland, observations which they have since extended and confirmed. These observers found that total removal of the organ was followed by a permanent glycosuria, with wasting and other phenomena of diabetes, and subsequent death, results which did not follow partial extirpation or ligation of the duct. These observations attracted much attention, and were the starting-point for others of a similar character, notably by M. LÉPINE, M. HÉDON (who reviews the whole question in an interesting article on "Diabète Expérimental" in the supplement to the *Montpellier Médical*, Jan. 1892), M. GLEY, and Dr. VAUGHAN HARLEY.[5] The sum and substance of all these experiments amount to this—that glycosuria, and, if there be a sufficiently long survival, a true state of diabetes, ensue upon total extirpation of the pancreas, whereas such a condition is never established if only a small portion of the gland be left intact. The explanation afforded by M. LÉPINE of these phenomena is interesting. He avers that the pancreas, like the liver, has a double function. Its office as a digestive gland, secreting a special ferment for that purpose, is not its sole duty. Its cells, which are disposed in relation to bloodvessels quite as much as to the excretory ducts, have also the property of forming a special *glycolytic* ferment, which finds its way into the blood, and is employed in destroying the sugar therein. He thinks that the leucocytes take up this ferment, and one writer hazards the suggestion of its alliance with the fibrin ferment that these corpuscles contain. So long as any gland cells are intact and capable of producing this ferment, glycosuria will not occur; but when they are entirely removed, the glycolytic action ceases, and glycosuria results. All this is purely hypothetical, for the ferment has not been separated, although the analogy with the liver is highly suggestive. As to the competence of small and residual parts of the gland which still retain their vascular connexions to ward off the occurrence of diabetes, it is

[1] Path. Trans., 1872, xxiv., p. 121.

[2] THE LANCET, Dec. 21st, 1872.
[3] Path. Trans., 1883, xxxiv.
[4] THE LANCET, vol. ii. 1890, p. 383.
[5] Journ. Anat. and Phys., Jan. 1892.

pointed out that in the case of the thyroid "cachexia strumipriva" does not happen unless that body is entirely extirpated. Whether this ingenious hypothesis be substantiated or not, it does seem clear that a certain number of cases of diabetes may be linked with destructive lesions of the pancreas, which entirely inhibit the functions of the gland. Dr. VAUGHAN HARLEY has recently[6] recorded two cases of pancreatic diabetes observed by him at Christiania. One, exceptionally acute, was allied with suppuration of the gland; the other, of much longer duration, with cancer, which, it may be remarked, has not usually been observed to be associated with glycosuria.

In his paper read at the Royal Medical and Chirurgical Society last Tuesday, Dr. H. J. TYLDEN ventured to dispute the inferences drawn by M. LÉPINE from experiments and also those afforded by morbid histology. Granting the existence of a glycolytic ferment in the blood, he objected that its diminution in diabetes might only be a secondary phenomenon, and that clinical experience pointed more in favour of increased production of sugar in diabetes than to a diminished power of its destruction. Moreover, he was inclined to attribute the results of total extirpation of the pancreas to extrinsic lesions incidental to the severe operation. It is curious, however, that in such experiments as those of HÉDON—where the pancreas was removed in portions—no glycosuria occurred until after the last fragment was removed, although the severity of the earlier operations must have been as great as the last. In the debate that followed the reading of Dr. TYLDEN'S paper it will be seen that Dr. BRADFORD adduced strong grounds for accepting a pancreatic diabetes from the physiological standpoint, and Dr. GEORGE HARLEY from the clinical side; whereas Dr. ROLLESTON inclined to Dr. TYLDEN'S opinions, and even hinted that pancreatic lesions might influence hepatic functions through the nervous system. Dr. TYLDEN has done good service in studying the morbid changes in the pancreas, and especially its cirrhotic condition, which he shows to be by no means confined to diabetes; but then it must be remembered that there may be changes in organs capable of profoundly influencing their functions which may escape the closest scrutiny. At any rate, we do not think that the study of the pancreas in relation to diabetes should be too lightly abandoned now that it has received such important aid from experimental physiology.

THE Draft Charter for the new teaching university in London as passed by the Lords of the Privy Council will be laid on the table of both Houses of Parliament on their reassembling on the 9th prox. It must remain there for a month; in six weeks, therefore, we shall know whether the Charter for what would probably be, under its provisions, the largest medical university in the United Kingdom will be granted. It is evident that considerable opposition will be made to its passing through the House of Commons, and an attempt to refer the whole matter back to the Royal Commission is being made. This attempt, if successful, will prevent any settlement of the questions for the present generation, and will serve to reopen the old controversy which rendered invalid the action of the Senate of the University of London. The opposition against the provisions in Arts is more formidable than that raised against the medical portion of the Charter. Many members of the University of London still fear that the new University may in some way damage the work and prestige of the older institution; but as a collegiate training of two years is insisted on in the case of students from other universities, it is not easy to see that there can be any marked clashing of interests, especially if the existing University maintains an open portal and its present examination standard. It cannot be supposed that, in the face of this regulation in the case of students from other universities, the Council will lay down a shorter course for any of its own students. The complaints as to the non-recognition of University extension lectures, evening classes, and other similar lectures at various places have been made in ignorance of the fact that the collegiate training, if it is to be of any good, must ensure a long and regular course of study, as in the case of a medical student, for whom a five years' curriculum is now made imperative. Another objection, which will carry more weight in the minds of many, is that King's College is an institution whose professors, with scarcely an exception, necessarily belong to the Church of England. But most people who have spoken or written on this line have lost sight of the great preponderance of the medical element on the Council, and argue as if the two teaching colleges—University and King's—alone formed the University. Out of a council of forty members, only three will be direct nominees of King's College. A stringent clause prevents the imposition of any religious test by the Council of the University. The great representation is in the hands of the teachers in the medical schools, for seats are provided for at least fourteen. Most of the objectors have forgotten that it is mainly in the interest of the London medical student, and to give him privileges similar to those now given at the other centres of medical teaching, that this University has become a necessity. Side by side with the medical grievance the movement for a University in which the teachers should have a practical control has also found great support. So for two defects in the existing University of London a remedy has been found. If a medical university alone were possible, the Royal Colleges would probably have succeeded in forming such a one; but it was only by an alliance with the teaching Colleges that faculties of arts and science could be established, and a full University scheme be thus secured. The objections to the medical clauses are chiefly made by the authorities of the Victoria University, and appear to us to be very ungracious and uncalled for. The medical students of Manchester, Liverpool, and Leeds have the usual facilities for obtaining degrees, whilst the students in London have none, save on conditions which are prohibitive except to a small minority. The plea is immediately put forward that the London teachers will unduly lower the conditions on which the new degree shall be given, and specially depreciate the training of the medical man in arts and science. But surely if the professors at Manchester could be trusted when their Charter was granted, the London teachers are entitled to have the same confidence placed in them. We suppose that on the first council of the new University members will be found who will be quite as anxious for the good name of

[6] Brit. Med. Journ., Jan. 2nd, 1892.

the degrees of the new University as is the case at the other universities. But this objection as to the depreciation of the degrees is merely a device put in the front in order to support the real apprehension of the northern teachers. They object to the clause requiring two years' residence at the final part of the curriculum, which they think will draw men from the northern schools to the London centres of clinical instruction. We question whether the Victoria University will be affected more than any other university, but, if so, the remedy will be in their own hands. If the clinical teaching be better in the provincial schools than in those of the metropolis—and it can be improved in both—the students will very quickly recognise the fact, and will not desert a school near to their homes, and at which they have already studied, for a distant one where the instruction is inferior. Such jealousy ought not to influence the Houses of Parliament any more than similar complaints from Edinburgh and Dublin influenced the Lords of the Privy Council, before whom the Victoria University should also have lodged their objections. A circular letter, signed by the heads of King's and University Colleges and the Deans of the Medical Schools (with the exception of St. George's and Westminster Hospitals), has been sent to all the metropolitan members of Parliament asking for their support, and we trust that the solution of the medical difficulty in London, which offers the only hope for the present generation, will not be frustrated on a side issue.

Annotations.

"Ne quid nimis."

THE PREVENTION OF INFLUENZA AND OF MEASLES.

A CURIOUS misapprehension of the real facts with regard to the prevention of measles is being put forward by means of letters and other contributions addressed to a number of our contemporaries by way of comparing this disease with epidemic influenza. The point is put forward as significantly as anywhere by Dr. Frank G. Clemow in a letter to *The Times* of Jan. 25th. He draws a comparison between influenza and measles as regards the non-discovery of their cause, and here he is unquestionably right. He next compares them in regard to the results of isolation by saying of measles, amongst other diseases, "these are well under control," and he then asks, Why should not the same be done for influenza? Here he, with others, falls into error. We have again and again pointed out that the measles mortality in this country is not only enormous and apparently all but uncared for; but that instead of its being under control it is steadily increasing, and that but little effort is made to ascertain the causes of this increase. Over 13,000 lives are annually sacrificed directly to measles in England and Wales; and not only so, but whereas in the ten years prior to the passing of the Public Health Act, 1875, with its provisions as to isolation, the mean rate of mortality from measles was 401 per 1,000,000 living, it has risen during the decennium 1881-90 to 440 per 1,000,000. This rate exceeds anything that can thus far be directly attributed to influenza; but whilst panic arises about the disease the fatality from which is so notable amongst the well-to-do and the aged, the terrible death-roll from measles, which has its incidence especially on the infantile population amongst the lower classes, passes all but unheeded.

OATH ADMINISTRATION IN COURTS OF LAW.

SINCE the appearance of the letter from our correspondent "L." in last week's issue of THE LANCET we have had an opportunity of perusing the Act to which he referred and of verifying the statement he made. The Act is, in its full title, An Act to Amend the Law as to Oaths, and shortly, the Oaths Act, 1888. It appears to be very little known, but is important as providing not only the alternative alluded to by "L.," but also the affirmation for those who have no religious belief, and those who object to the taking of an oath as contrary to their religious belief. Clause 5 is precisely as "L." gave it, and may be repeated here: "If any person to whom an oath is administered desires to swear with uplifted hand, in the form and manner in which an oath is usually administered in Scotland, he shall be permitted so to do, and the oath shall be administered to him in such form and manner without further question." The Act is a very short one, and may be obtained from Messrs. Eyre and Spottiswoode, the Queen's Printers, for the sum of one halfpenny. Many will no doubt avail themselves of this preferable mode of adjuration, and possibly it may come to be generally adopted.

THE LOCAL GOVERNMENT ACT OF 1888 IN RELATION TO ASYLUM AUDITS.

DR. CAMPBELL, medical superintendent of the Counties Asylum at Carlisle, has sent to us a reprint from the current number of the *Journal of Mental Science*, in which he deals with "The Local Government Act of 1888: its Probable Action on the Treatment of Insanity in England." It appears that the auditor at his first visit after the Act was passed "surcharged" one item, a gratuity of £10 to an attendant. At his second audit, five months later, he surcharged three gratuities—namely, one of 8s. for bringing back an escaped patient, another of a sum of £823 for attendants' pay because their names and rates of pay had not been fully entered on the minutes, and another of a sum of £51 given in three grants, one to a dying attendant, the other two to deserving attendants who resigned for special reasons. Dr. Campbell has been apparently singularly unfortunate in this matter, as his asylum is the only one out of eighteen county asylums which have given gratuities since the passing of the Act, where the auditor has surcharged such payments. He naturally objects to this question being left to the caprice of asylum auditors, and contends that, if the giving of a gratuity is illegal, it should be so for all. There are, as he says, frequently circumstances occurring in asylums in which, in the interest both of the institution and its inmates, sane and insane, it is almost a necessity to give a gratuity or extra pay for special actions. In the absence of any reason for disallowing the gratuities referred to, we agree with Dr. Campbell that the auditor in this case seems to take a most severe view of the subject. There are unquestionably risks of evils arising from any extensive system of gratuities, but that is not the point. If, in their collective wisdom, the asylum authorities are of opinion that a gratuity has been earned, and is the most desirable method of rewarding special service, and sanction its being given, we think an auditor ought not to interfere with that sanction except on very strong grounds, since they do so at a great risk of interrupting the efficient and beneficial working of an institution of this type. In this sense must Dr. Campbell be understood when he says that whatever deals with the treatment of the patients in English county asylums deals practically with the treatment of the insane

in England. "The Local Government Board," he continues, "no doubt have the power to authorise such necessary grants as those referred to, even although no special provision may be found for them in the law, or they can indicate the legal and proper mode of making such payments."

THE SALE OF DISEASED MEAT.

IT is not often that we have to deal with a case of such flagrant and dangerous abuse as that in which an Edinburgh butcher was recently convicted of selling for food the flesh of an animal which had died of anthrax. Here there could be no doubt as to the justice of the sentence. The virulence of anthrax contagion, even after the death of the affected animal, has been abundantly proved. In this case it was again conclusively shown by the fact that a man inoculated by the diseased meat had died in consequence. Let us but glance at the risks incurred by any who might in perfect ignorance have purchased it at the butcher's counter, at the possible effects of handling it with skin-cracked hands perhaps, or of eating it under-cooked as a juicy steak, and we shall not fail to share the regret expressed by the presiding sheriff, that the circumstances of the prosecution did not allow of imprisonment without the option of a fine. It were well, in our opinion, if the requirements of law in matters of this kind were made even more stringent than they now are. There is usually something unnatural even in the so-called natural death of an animal. Unless in such exceptional conditions as death by accident or from asphyxia consequent on over-fattening, an antecedent pathological state injuriously affecting the quality of the meat may be taken for granted, and this fact is rendered the more significant by the difficulty of effective depletion by bleeding. In this connexion we might learn something from the Jewish Code, which, with wise, if excessive, caution, condemns as unfit for food the animal which has died "of itself."

PROFESSOR CELLI ON WOMAN'S PLACE IN SOCIAL HYGIENE.

AT Rome, on the 10th inst., in presence of Her Majesty the Queen of Italy, the accomplished occupant of the chair of State Medicine in the Sapienza addressed a brilliant audience on woman's place in social hygiene. Professor Celli turned to excellent account his experiences in Great Britain at and after the International Congress in August last, and showed his Italian hearers how much can be effected by organisation in fields so vast and so diversified as those of sanitary and social reform. There were many among his audience of ladies who had nothing to learn in the matter of enlightened and energetic work for the benefit of the sick and needy; many of them, it is safe to say, from Queen Margaret herself downwards, whose lives were honourable examples of self-sacrifice in the relief of suffering and misery. But something more is required than individual initiative and individual exertion, however well-directed and however exemplary. Beginning with Lady Mary Wortley Montagu, Professor Celli traced in vivid and impressive outlines the story of woman's work in the hygienic rehabilitation of England, dwelling at considerable length on the Ladies' Sanitary Association, founded in 1857, and following it up and out into all its beneficent ramifications to the present hour. On one point he laid particular stress, and that was the popular literature issued under the auspices of the Association, literature setting forth in an easily understood and attractive form the main factors of personal and public well-being, and contributing to that most desirable consummation by which (in the words of Sir James Coxe) "every individual shall be taught to become the intelligent custodian of his own health." By thus indoctrinating the future generation, particularly the wives and mothers, in all that conduces to a healthy and normal life, there is prepared that public opinion which is so sorely desiderated in the Latin races, and nowhere more than in Italy, whereby pressure is brought to bear on municipal and central authorities, and abuses corrected and reforms insisted on which hitherto have been preached and prayed for in vain. From England Professor Celli passed to Germany, and enumerated the salutary innovations in public, and particularly in school hygiene, promoted, if not initiated, by the Empress Frederick; and thereafter, having reviewed the sanitary position of France, he concentrated himself on the wants of Italy, whose numerous local and private charities were so many foci capable of being fused together till something like a "Ladies' Sanitary Association" was reached. Drawbacks and difficulties there were, as he amply admitted—impediments due to the special circumstances under which Italy had wrought out her political redemption. Heavy taxation, restricted means, backward education, were conspicuous among these. But they would all yield to time and to persistent organised effort. "On you, the women of Italy," Professor Celli concluded, "rests the moral and physical regeneration of Italian youth. To achieve this you have not a day to lose, not a sacrifice to spare. In the combat for humanity there are posts innumerable. Those among you who are not pre-engaged in the hallowed sphere of the family will assume the place of honour. Let each select her part, her corner, great or small, according to her strength, her aptitude, her vocation; let her consider it as a sacred duty to give of her means or her abilities to fortune's disinherited ones. And so, when from the luminous examples of female forethought and heroism which honour your sex and our common country, emerges the collective power of an educative charity, you, not by calculation or in self-seeking, but by spontaneous instinct and sentiment, will become one of the most vigorous of the healing forces (*forze medicatrici*) of social well-being." An eloquent appeal to the sovereign under whose presiding favour the audience had assembled closed Professor Celli's opportune and inspiriting address, the fruits of which we hope to see one day manifested not only in the *classi discredati*, but throughout the whole life of Italy.

A LESSON IN PREVENTIVE MEDICINE.

PROFESSOR W. T. GAIRDNER has done good service in publishing a paper which he read before the Association of American Physicians in September last, and which tells the story of certain arrangements made in Glasgow in 1866 with a view to the prevention of cholera. At that time Dr. Gairdner was medical officer of health for the city, the sanitary condition of which led him to look with grave concern on the possible advent of cholera, the more especially because of the terrible results of that disease in previous epidemics, and notably in 1854. Between the latter date and 1866 one change of immense importance had been effected—the Loch Katrine water had been introduced into Glasgow, and its use was at once extended where this was necessary. To cities having sources of water-supply liable to excremental pollution the contrast between cholera in Glasgow in 1854 and in 1866 is of great significance. But the sanitary state of the city was in other respects very defective, and typhus fever told the tale in terms that seem almost incredible to those who have only known Glasgow after many years of such labours as have since been bestowed upon it by Dr. J. B. Russell and his staff. Hence cholera was dreaded, and, above all, Dr. Gairdner feared the effects of panic, which might result from a sudden outburst which had already gained ground on account of unknown attacks of choleraic diarrhœa. How

were the inhabitants to be so dealt with in detail as to avoid such calamities? The question was solved by a chance encounter with a clergyman who at once declared that the Church workers would band themselves together as an organised body for the purpose "as volunteers." The hint was taken by Dr. Gairdner. Within a brief period every Church, regardless of differences of creed, supplied its volunteers; from these the workers were selected with care until between 3000 and 4000 "intelligent and active visitors" had been chosen, and shortly every home, every head of family, and every householder knew in advance what to do in case suspicious symptoms arose. They were urged to promote ventilation and cleanliness in their houses and tenements, all was prepared to meet an emergency, and confidence was instilled. Dispensaries, hospitals, and nursing arrangements were also set on foot; and when at last cholera came, it was limited to about sixty-six cases of true cholera and a few hundred of choleraic diarrhœa in half a million of people. The visitors were, as stated, volunteers, and gave their services "for the love of God." But still, a scheme to save Glasgow from cholera could not be set on foot without some substantial expenditure, and in the Scotch city, as everywhere else, there was at least one ready to complain that, though a key had been bought to lock up the horse, the cost had been thrown away, since the horse had never been stolen. "An eminent citizen of Glasgow," says Dr. Gairdner, complained "that after all the fuss made about the cholera, and all the expense incurred in its prevention, 'the cholera did not come.'" Similarly "eminent" citizens are unfortunately to be found on most town councils and other sanitary bodies.

THE VALUATION OF INSANITARY PROPERTY.

AN important judgment has been delivered in the Queen's Bench Division in the case of "Gough *v.* The Mayor and Corporation of Liverpool," in connexion with the valuation of insanitary property. The case has several times been before courts of law and before the arbitrator, the point in dispute being the basis on which an owner should be recompensed whose property was condemned as unfit for human habitation. The decision now given by Justices Lawrence and Wright is one that will materially assist in the removal of such properties without subjecting the ratepayers to the burden of paying compensation which is unreasonable in amount. Briefly stated, the judgment declares that an arbitrator ought not in such cases to take into account solely the amount which could be extorted by rent from people who were obliged by the necessities of their work to live in the neighbourhood in question; but that he ought also to take into account the sanitary condition of the property and the amount that would have to be expended in making it decently habitable. Thus the corporation are at last supported in their contention for a principle which is of great importance.

FUNCTION OF THE HAIR TUFTS IN MAN.

IN the January number of the *Journal of Anatomy and Physiology* Dr. Louis Robinson formulates a theory to account for the persistence in man of the tufts of hair usually present in the axillæ and over the pubes. These he imagines to be the persistent remnants of hair-tuft developed with reference to the clinging or grasping power of the young, and as a means of enabling them to cling to the parent, when he or she, as the case might be, was not in a position to spare an arm without much imperilling the chances of escape or rendering movement difficult. Naturalists have observed that young apes hang beneath the body of the mother and sustain themselves by grasping the hair, and it is stated that certain male gibbons assist in carrying the helpless young. It is an interesting point that in these apes the period of immaturity is prolonged almost as much as in man. Other considerations which Dr. Robinson looks upon as supporting his theory are the appearance of the hair at puberty, its appearance in both sexes, and the fact that it often appears earlier and more plentifully on the female. It also exists in parts where the young of tree climbing animals could attach their hands without danger of violent contact from obstacles, and Dr. Robinson has ascertained by measurement that in most cases the situation of the axillary and pubic tufts is within easy reach of the hands and feet of infants when their limbs are extended, if the body of the adult is in the position taken by that of an anthropoid ape in climbing. The theory is no doubt ingenious; but objections to it readily occur. Dr Robinson considers some of the most obvious of these, such as the existence of similar hair elsewhere and the sensitiveness exhibited by the skin when the hair in those parts is pulled. These, of course, are capable of being explained; but the theory would be very much strengthened if any example could be quoted of an anthropoid ape in which these tufts are actually used in the manner suggested by the author. Their development, if the theory is correct, must have been very much greater in his ancestors than it is in man at the present time to account for their persistence now, not only in the absence of any use for them for so many ages, but actually in spite of very considerable drawbacks to their existence, such as must exist in the friction to which they are exposed.

THE VENTILATION OF SLEEPING APARTMENTS.

AN important point in sanitation was discussed last week in an action brought before a county court in the eastern counties. The suit was one instituted by a master to enforce payment of £10, the remainder of a premium due to him by a father for apprenticeship of his son, but withheld on the ground of failure to provide suitable board, lodging, and business training. The question of chief interest in connexion with the case was that of sleeping accommodation, and the facts elicited were the following:—From the beginning of his apprenticeship the lad had slept in a room affording about 440 cubic feet of space, which had formerly been used as a store closet. There was no direct communication whatever with the outer air, but the door and the solitary window above it opened into a passage in the interior of the house. In this passage were the entrance doors of two crowded work-rooms, which were often occupied till a late hour at night. Opposite the door of the closet was the single window by which (provided it was open) the passage communicated with the outer air. It was contended by the defendant that here the arrangements for ventilation were faulty and injurious to his son's health, and that in effect the air which commonly entered the sleeping closet was that which escaped from the well-used work-rooms. The quality of this atmosphere may be imagined. Medical evidence was tendered by both parties in this action, with the result that on one hand the closet bedroom was freely condemned, on the other it was considered "undesirable," but still not such as to cause in a healthy occupant the signs of nervous weakness from which the boy was by general admission suffering, and it was, moreover, such a room as some poor families were known and allowed to inhabit. Guided apparently by the terms of this evidence, the jury gave a verdict for the employer. We must confess that we cannot agree with their decision. The cubic space allowed, inadequate though this was, might, after a fashion, have sufficed had other conditions been healthy. When, however, we find the standing rule that every sleeping apartment must have direct communication with the outer air completely ignored, we need not be at a loss to account for the nervous and general weakness

of its half-smothered inmate. We cannot doubt that the wan, anæmic, and exhausted aspect so characteristic of young *employés* in many town shops and warehouses is the direct result of this very lack of a pure atmosphere as much as of overpressure. It would, therefore, be a subject of lasting regret if a decision like that above mentioned should ever be suffered to acquire the force of a legal precedent.

SMALL-POX AND DEWSBURY WORKHOUSE.

ON several occasions during recent years the practice of the Dewsbury guardians to turn one of the workhouse buildings into a small-pox hospital has led to the spread of the infection to inmates of the infirmary, and, as we have noticed, this has been strongly condemned by the Local Government Board. At last that Board has informed the guardians that unless they at once receive a definite assurance that the practice shall be discontinued, they will issue an Order prohibiting the reception of small-pox cases within the workhouse. The action of the guardians still seems uncertain, for they say in answer that some of the statements contained in the report of the Government inspector were inaccurate, and they ask some explanation concerning the authority on which they were made. Whatever information may be forthcoming on this point, it cannot justify the exposure of helpless and sick paupers to the poison of small-pox in the workhouse, and it is to be hoped the Order will be at once issued.

GASTRIC ULCER.

THE causes of round ulcer of the stomach have been studied by Dr. Shcherbakoff of Moscow by means of experimental observations of dogs, with some interesting, though not very decisive, results. Loss of substance depends as a rule upon impaired circulation, but such loss of substance has a great tendency to be replaced. In order that a true ulcer may result there must be other favourable conditions, as an increase in the acidity of the gastric juice and a diminished resistance of the tissues. This fact, which has been deduced from clinical experience, has not hitherto been subjected to experimental verification. Dr. Shcherbakoff produced artificially a loss of substance in the stomachs of forty-five dogs by injecting an emulsion of chromic acid into one of the short gastric arteries. The loss of substance produced was precisely similar to a recent round ulcer, but in about five days cicatrisation began, and was complete in two or three weeks. In some cases within a week after the injection definite quantities of hydrochloric acid were introduced through gastric fistulæ; in other cases small quantities of aniline or pyrogallic acid were introduced into the stomach, or repeated bloodletting was practised before the injection of chromic acid, and the alteration of the blood induced by these methods was maintained by their repetition. In all these experiments ulcers were produced, and in some perforation occurred. With aniline also loss of substance was produced, even when no chromic acid injection was made. In order to solve the problem of the relation of the disease to impairment of the blood, observations were made on the changes of alkalinity in the blood and of acidity of the gastric juice. It was found that aniline reduced the alkalinity, but no relation between this reduction and the progress of the ulcer could be detected. Injections of pyrogallic acid and bloodletting did not definitely reduce the alkalinity. All these methods, however, increased the acidity of the gastric juice, and of course at the same time diminished the resisting power of the tissues, which diminution, however, is not to be considered as mainly due to the decreased supply of blood, but to the impairment of the whole of the vital conditions. Further experiments were made by introducing hydrochloric acid in definite daily quantities subsequently to the artificial impairment of the blood, but without any chromic acid injection. In the first case the animal died on the sixth day; several ulcers were found, one perforating. In the second case the animal was killed on the twenty-first day; superficial losses of substance of the mucous membrane were found. In the third case the animal died on the twenty-fourth day from a perforating ulcer. In all these there was a marked reduction in the alkalinity of the blood. It therefore appears that decreased alkalinity of blood due to impaired nutrition, together with increase of acidity in the gastric juice, form highly favourable conditions for the development of gastric ulcer. But, in addition to these, there are, in Dr. Shcherbakoff's view, a number of other causes which are at present unknown.

SPONTANEOUS CURE OF A SEVERE ABDOMINAL WOUND.

DR. SCHILDT mentions in *Duodecim*, a Finnish medical journal, a case, showing that, occasionally at least, a large wound into a serous cavity which looks hopeless enough may heal without treatment. He was called some years ago to a poor man supported by charity, who, in consequence of inflammation of the groin, had a large gaping wound of the abdominal wall, through which some six inches of the small intestine protruded, all covered with blood, added to which there was a discharge of fetid matter. The man was sent to the hospital, where, however, he could not be admitted, as all the beds were full. He was therefore taken home again, and received no treatment whatever. Nevertheless, Dr. Schildt a short time ago happened to see him alive and well, the wound having healed spontaneously.

MEDICAL EXPOSITION AT MILAN.

THIS undertaking may be regarded as a natural outgrowth of the Italian "Legge Sanitaria," or Public Health Act, promulgated on Dec. 22nd, 1888. That great statute, with which the name of Bertani is indissolubly connected, has given to sanitation and hygiene in Italy an impetus which increases from year to year. At the close of May and beginning of June a sanitary congress will be held in the Lombard capital to form the basis of a "Lega di Resistenza e Previdenza," in which the working practitioners and health officers of the Italian kingdom will combine for self-organisation and protection, in the first instance, and for the furtherance of the sanitary interests of the people in the second. The organising committee includes many of the most prominent names in medicine, surgery, and hygiene throughout the peninsula, and its programme, now before us, is at once comprehensive, practical, and enlightened. Concurrently with the sittings of the Congress, at which this programme will be discussed, an exposition on the largest scale of the whole armamentarium of the healing art, public as well as private, will be on view. Every implement in the armoury of the working practitioner, consultant, and health officer will be represented. Aliments of all kinds; pharmaceutical specialties, including the latest accessions to the various pharmacopœias; surgical and orthopædic apparatus; mechanical aids to diagnosis and therapeutics; plans of hospitals, civil, naval, and military; the most recent innovations in hydrological and climatic health resorts as well as in the Red Cross service in the field and afloat; statistical tables and medical publications of every category, will form the *matériel* of the exposition. Special juries of experts have been nominated to award prizes for the best examples or specimens of the above appliances, products, or plans, and Milan, the seat of Congress and Exposition alike, will

utilise her great resources for facilitating the participation of visitors at both. The recent epidemic through which she has passed—more severe in its incidence than in any other centre of Upper Italy—may be supposed to have quickened her initiative in the great prophylactic and therapeutic enterprise she has set on foot, and her example, we doubt not, will be followed in future years by other Italian cities, to the furtherance of medical science and the improvement of the health conditions, hitherto so little satisfactory, throughout the peninsula.

INSPECTION OF EXAMINATIONS BY THE GENERAL MEDICAL COUNCIL.

As reported in the proceedings of their last session, the Council then resolved to appoint an inspector of examinations, to visit and report on the final examinations in medicine, surgery, and midwifery in the three divisions of the United Kingdom during a period of three years. We now learn that the appointment of the inspector for this year will be made by the Executive Committee at its meeting on Feb. 22nd. We presume therefore that any of our readers who may desire to become candidates for the inspectorship would do well to take such steps as they may deem desirable in the matter. The emoluments attached to the post are a salary of £200 per annum, together with travelling and hotel expenses.

"THE DOCTOR WOULD NOT COME."

MANY jurymen seem to be under an impression that medical men are paid officers of the State, and bound to go at everybody's or anybody's call. Mr. Braxton Hicks recently very properly explained to such a juryman at an inquest on the body of a child that doctors were not bound to come when called. And he added when people knew this they would be "more likely to send for a medical man when he could do a person good," instead of waiting till death was threatened. The coroner is quite right. This is not a time for medical men to stand upon their rights or to discuss abstract questions. No profession is more ready than ours with its help and its pity by night or day. But there is a limit even to medical kindness, to say nothing of the physical limits of strength and time. A little more consideration for medical men and medical service will be amply recognised by the profession. This will be shown in two ways, as the coroner suggested—in calling them in early to save life, and not merely to certify the cause of death, and in paying them promptly and with some regard for their calling.

DEATH AFTER VACCINATION.

MR. JOHN TROUTBECK has just concluded an inquest on the body of a child aged three weeks, who had been vaccinated eight days after its birth in the workhouse in the Buckingham Palace-road. The facts of the case appear from the published evidence to be as follows: The baby was an eight months child, weighing only 4 lb 3 oz. After its vaccination its mother took it out of the workhouse and applied cold cream to the child's arm, and a few days later the child died. Mr. Oliphant Langston, surgeon, of Broadway, Westminster, said that at a necropsy he found all the organs healthy, and that he had no hesitation in saying that death was accelerated by vaccination. Mr. Bond and Mr. Webb, the latter of whom vaccinated the child, said, however, that death was due to the condition of the child's lungs, Mr. Bond expressing the opinion that the presence of the sore on the arm could not fail to hasten the death of a child in such a condition. It is obvious from the evidence that the arm had not healed, and on this point Mr. Bond added that cold cream applied to the vesicles would dissolve the natural crust on the child's arm. The jury eventually returned a verdict that death was due to congestion of the lungs accelerated by the sores on the arm, but exonerated Mr. Webb from all blame. It is certain that the vaccination was done under very unfavourable conditions. The child's mother had been deserted by her husband, and in her trouble had taken refuge in the workhouse, but left shortly after the vaccination of the child, taking it with her. The mother, in her ignorance, adopted the course most likely to prevent the healing of the arm, which was very likely retarded by the lung affection from which the child suffered.

RETINAL BLOODVESSELS.

DR. JAMES MUSGROVE gives an account in the last number of the *Journal of Anatomy and Physiology* of a method of preparing the retinal vessels for demonstration either with the naked eye or with the lantern. His observations were carried out on the eye of the ox, but his method is equally applicable to that of other animals or of man. In the case of the ox the injection can be made quite well after the eye has been removed from the orbit. As much as possible of orbital fat and tissue should be removed with the eyeball, and the vessels are to be cut far back. The injection is made through the ophthalmic artery with a hand syringe, and the eye should be kept in hot water for half an hour before the injection is made. When the injection is completed the eye is allowed to cool for two or three hours to allow the gelatine in the injection to set. The entire retina is then removed by cutting through the cornea and iris and removing the lens and vitreous. The retina is then found hanging down from the optic disc, and its attachment there is divided with a knife. The entire retina may thus be freed and floated out on water, and it is then spread out, with considerable trouble it is true, on glass by means of a small camel-hair pencil. The specimen is then dehydrated and clarified in oil of cloves, after which balsam dissolved in benzol is spread over it, and another thin lantern slide used as a cover glass. In this way the retinal vessels can be clearly demonstrated, and Dr. Musgrove gives a short account of their distribution, in which he found a remarkable uniformity in the different retinæ examined.

THE DELAY AT THE VENICE CONFERENCE.

IT has been stated that the International Sanitary Conference, held at Venice, has been retarded in its work because the English delegates had to refer home for instructions the proposals made by the French delegates. This, we must confess, is a somewhat peculiar way of explaining the delay. There was nothing novel or unexpected in the French proposals which were presented to the recent International Congress of Hygiene by Dr. Brouardel, who was delegated by the French Government to discuss this matter in London. The French Government had again delegated Dr. Brouardel to repeat the same proposals at Venice. In vain we protested at the time that the International Congress of Hygiene was not meant to be a mere picnic of irresponsible sanitary reformers gathered together just to read papers and exchange ideas. We insisted that these congresses laid down the basis of future sanitary legislation. We pointed out that most of the Governments of Europe sent official representatives who were to bring back to the statesmen of their respective countries advice as to what sanitary legislation was necessary; especially is this the case with respect to all international measures for the preservation of public health. The French official delegates were therefore prepared and anxious to lay before the Congress held in London last August the very proposals which would appear to have come as such a surprise upon the conference now sitting at Venice. Dr. Brouardel, in his speech delivered in the first section (Pre-

ventive Medicine), alluded to these proposals, and he was naturally not a little surprised to find that the statements which were practically, if not officially, proposals emanating from the French Government were barely noticed and but feebly discussed. Now, after five months' lapse of time, similar proposals are made at Venice by identically the same French official delegates, and the English representatives have to refer them home for further instructions!

INTESTINAL OBSTRUCTION FROM MECKEL'S DIVERTICULUM.

ODERFELD publishes in the *Gazeta Lekarska* the particulars of an operation for acute obstruction of the bowel caused by the presence of Meckel's diverticulum. The distal end of the diverticulum had become attached to the mesentery, thus forming a loop through which a coil of intestine had slipped. The excessive formation of gas in the bowel had compressed the knuckle of intestine and caused it to become fixed. The author, in performing laparotomy, freed the incarcerated coil by separating the adherent end of the diverticulum, and to prevent a relapse he removed the latter by a circular incision at its base. The patient recovered. Oderfeld also discusses the mechanism, pathology, and the various causes of this form of obstruction, and states that no case is known in which the cause of the obstruction was diagnosed before the operation. Two symptoms, however, possess a certain diagnostic value. When obstruction occurs in a patient suffering from harelip or some other congenital deformity, the former is probably due to the presence of Meckel's diverticulum. It is also important to have the history of the patient's early life. When during the latter an umbilical fistula has existed with fæcal discharge, which, however, has occasionally healed voluntarily, the same conclusion may be drawn.

CEREBRAL LOCALISATION.

IN a recent number of the *Dublin Medical Journal* Dr. E. H. Bennett describes a case which presented an interesting condition with reference especially to the question of cerebral localisation. The patient was a man of forty-five, who was first seen by Dr. Bennett in September, 1890. At that time he had much difficulty in walking, and even in standing. His articulation was slow and indistinct, but he used correct words; his expression was vacant, his eyes prominent, and his memory much impaired. There was no definite paralysis of the limbs. His power of standing became gradually more impaired, and he was even unable to sit on a chair without falling. He fell to the right side. His memory also became worse, and his mental condition generally more feeble. There was no optic neuritis. The intensity of his symptoms gradually increased, and he passed into a comatose condition, in which he died on Dec. 3rd. Even at the last there was no definite paralysis, and his ability to move the arms and legs as he lay in bed was retained. At the necropsy it was found that there was a tumour of the brain substance, which involved the convolutions of the right hemisphere. It was hemispherical in shape, about the size of half a Tangerine orange, the flat base being directed outwards to the dura mater, which was adherent to it, and the rounded surface inwards. It lay directly over the fissure of Sylvius, obliterating the lower two-thirds of the fissure of Rolando. The lower half of the ascending parietal convolution was involved, except ten millimetres of its lower end. The whole of the ascending frontal convolution, except twenty-five millimetres above and ten millimetres below, was involved in the tumour, and so were parts of the middle and inferior frontal convolutions. It will thus be seen that a considerable part of the so-called motor area was affected by the tumour, and yet there was no definite paralysis. It is not easy to offer any explanation of such a condition, unless we are to suppose that the tumour, growing as it apparently did from the membranes, and pressing inwards on the cortex, had led to very greatly impaired function of the cortex cerebri without any actual abolition of it, and with reference to the possibility of such an explanation it would be very interesting to know the condition of fibres in the corona radiata, in the internal capsule, and in the pyramidal tracts of the cord.

DEATH OF DR. ALFRED CARPENTER.

WE regret to announce the death of Dr. Alfred Carpenter of Croydon, Surrey, at the age of sixty-eight years. He was a native of Northampton, and took a prominent part in public affairs. He was J.P. for the county of Surrey. In the year 1882 he was appointed a member of the Royal Commission appointed to inquire into the condition of small-pox hospitals, and took an active interest in all questions of social economics. As a sanitarian he occupied a very eminent position, and his ideas on preventive medicine, hygiene, and the utilisation of sewage have given rise to much inquiry, and many beneficial results have been effected through his agency. He was a strong temperance advocate.

THE ANALYSIS OF RUSSIAN BREAD.

ACCORDING to *Reuter*, the Russian papers of last Monday published the official analysis of the adulterated flour recently bought by the Municipality of St. Petersburg city. The result would appear to show that it was not adulterated to such an extent as the *Novoe Vremya* announced some days ago. While this statement appears in a negative form, yet the fact that it is qualified by the sentence "to such an extent" does obviously indicate a certain amount of adulteration. The exact details of an analysis of Russian bread carried out in our laboratory appeared in our columns last week, and the results showed an adulteration, even in this specimen which was regarded as unusually good, equal to the addition of ten pounds of foreign substances to every hundredweight of flour. Our report was read with very general interest, inasmuch as it demonstrated distinctly that the flour had been tampered with, not, perhaps, to an excessive extent, as has been believed, but still to an extent which is both unpardonable and unjustifiable. In respect to the results, it is so far satisfactory to learn that our report is practically confirmed by the Russian official analysis, although the *Novoe Vremya* maintains that the official analysis is misleading, and it cites the opinion of several experts in support of this contention.

CASE OF URETHRO-VAGINAL FISTULA OPERATED ON BY VAGINAL FLAP.

Dr. OKER-BLOM relates the case of a farmer's wife who had lost the greater part of her urethra in her first confinement. The whole of the middle portion extending backwards as far as the bladder had been destroyed, whilst of the anterior portion only 1 centimetre remained. The sphincter itself was injured. The tissues between the neck of the bladder and the symphysis had disappeared, a cavity occupying their place. The entrance to the bladder below and behind was blocked by the vagina. The orifice of the vagina was narrow and extremely rigid, the mucous membrane being replaced by cicatricial tissue, which extended from side to side. The following operation was performed. In the first place the edges of the opening into the bladder, and of the remains of the urethra, with the tissue between them beneath the symphysis, were freshened, then the edges of the opening into the bladder were sutured to the remains of the urethra, the portion nearest the symphysis requiring four good-sized catgut sutures. The cavity beneath the symphysis closed by first intention, but the strain being too great, the stitches gave way. To

remedy this, a flap of mucous membrane was raised from the right side of the vagina. The posterior edge of this flap was sutured to the opening into the bladder, and the anterior edge to the remains of the urethra, whilst the middle portion was united to the tissues on the left below the symphysis. In this way a new urethra was formed, which healed by first intention. As no sphincter existed, a plug of cork was used as a substitute, which the patient always carried with her, and which closed the channel into the bladder sufficiently to prevent the escape of urine, but at the same time did not prevent micturition. She has for a month been able to follow her occupation in the fields without suffering the slightest inconvenience arising from the bladder.

RETRO-UTERINE HÆMATOCELE.

THE *Pester Medicinisch-Chirurgische Presse* reports a lecture by Dr. H. Swiecicki of Posen before the medical association of that city in which he discusses the various sources from which retro-uterine hæmatocele may originate, such as the Fallopian tubes, ovaries, and uterus, and mentions the immediate causes of the affection. He considers adhesions, followed by bleeding from beneath, as necessary factors in producing the hæmatocele, and mentions extra-uterine pregnancy as the most usual predisposing cause. He discusses the formation and course of the various kinds of the latter, and its relation to pelvic hæmatocele, and expresses it as his opinion that gonorrhœa and previous perimetritis are the most frequent causes of the abnormal pregnancy. Retro-uterine hæmatocele cannot be produced artificially, so that it appears other causes are present for the formation of the tumour besides adhesions and bleeding. Swiecicki agrees with Veit that the blood in the peritoneal cavity may coagulate, though slowly, and that the coagulum adheres easily to the pseudo-membranes. This process goes on until, by the continually increasing collection, pressure is exercised on the bleeding vessels, and may arrest further oozing. This bleeding is apt to take place in the direction in which the tissues are least capable of resistance—that is, towards Douglas' pouch. The treatment may be either expectant or operative. The latter consists in puncture per vaginam or per rectum, or in incision per vaginam or laparotomy. Swiecicki favours an expectant and symptomatic treatment, and, if operating at all, would either incise per vaginam or perform laparotomy. He considers the operation indicated when the hæmatocele is of considerable size, when the tumour shows no symptom of absorption after several weeks' expectant treatment, when septicæmia or pyæmia has begun, or when excessive pains or other unfavourable symptoms affecting the bladder or rectum exist.

INTESTINAL OBSTRUCTION DUE TO A LARGE GALL-STONE.

AN interesting example of this rare form of obstruction of the intestines occurred in a patient who was recently submitted to abdominal section and a large gall-stone removed. The patient, a man aged forty-three, consulted Dr. Murphy of West Malvern, on Dec. 20th, 1891, for a supposed bilious attack. He had been vomiting for three days, and there had been no action of the bowels for two days. The vomited matter was copious, and contained a large quantity of bile. There was great thirst, but no pain. Some resistance could be felt in the abdomen to the right of the umbilicus. Very little improvement followed the treatment commenced at that date, and on the 25th Dr. Brockatt of Great Malvern saw the patient in consultation and advised operation. This was performed early on the following morning. Under an anæsthetic, a hard, movable lump could be felt in the right iliac region. After opening the abdomen, this lump was found to be a hard mass which completely blocked the lumen of the small intestine. The intestine was held by the fingers above and below the obstruction, and an incision made in the long axis of the intestine, and what proved to be a large gall-stone was extracted. The intestine near was washed out thoroughly and the wound closed with Lembert's sutures. The patient had no further abdominal symptoms, but sank and died from exhaustion on the 31st of last month. Only a partial examination of the abdomen was permitted by the friends. There was slight peritonitis of some of the superficial coils of intestine on the right side in the neighbourhood of the wound, which was itself firmly united, and situated high up in the jejunum. On tracing the small intestine upwards, it was found to be firmly matted together by old adhesions, and the gall-bladder was incorporated with the mass and could not be separated. The gall-stone was unusually large, was pear-shaped, and measured 2 in. in length, 1¾ in. in its greatest transverse diameter, and 5½ in. in greatest circumference. In February of last year the patient was seen by Dr. Murphy for an attack of acute pain in the abdomen, which lasted for twenty-four hours, but was unattended by vomiting or followed by jaundice. His occupation was sedentary; but, with the exception of this attack, his health had been good.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The next "vacation course" of lectures and demonstrations will commence on March 9th, and will continue until April 6th. An elaborate prospectus has just been published.

Breslau.—Professor Kast of Hamburg has been appointed Professor of Clinical Medicine in succession to Dr. Biermer, resigned.

Gratz.—Professor Kratter of Innsbruck has been appointed to the chair of Forensic Medicine.

Kharkoff—Dr. Openkhovski of St. Petersburg has been appointed Extraordinary Professor of Therapeutics.

Strasburg.—Dr. Ernst Mehnert, Assistant in the Anatomical Institute, has been recognised as *privat docent* in Human and Comparative Anatomy with Embryology.—Dr. Martin Schmidt, Assistant in the Pathological Institute, has been recognised as *privat-docent* in General Pathology and Morbid Anatomy.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. A. Casini, Lecturer in Surgery in the University of Naples.—Dr. Palmer, formerly Professor of Physiology in the Howard University, Washington.—Professor Weber-Liel, of Bonn.

AT the annual meeting of the Obstetrical Society of London, on Wednesday, Feb. 3rd, there will be a ballot for the election of Sir Joseph Lister, Bart., and Sir William Turner, as honorary Fellows (British subjects), and for the election of Professor Credé and Dr. Lusk as honorary Fellows (foreign subjects). The number of British honorary Fellows is limited to six, and foreign honorary Fellows to ten.

THE death is announced of Dr. Leighton, the father of the President of the Royal Academy. The deceased physician was ninety-three years of age, and some years ago retired, after having enjoyed a long practice in Scarborough.

WE understand that at the third Lettsomian lecture on Monday next Mr. Rose will demonstrate on the dead subject the steps of his operation for removal of the Gasserian ganglion.

WELLINGTON COLLEGE SORE-THROAT.

BY J. G. BARFORD.

(*Continued from page 159.*)

"THE bleak, inhospitable moor on which the building has unfortunately been erected wore for the first time such a busy aspect as was almost sufficient to give an air of animation to a spot so desolate and cold" is the opening paragraph of *The Times'* leading article on the inauguration of the public opening of this institution by Her Majesty thirty-two years ago. The article goes on to state that, short as the distance is from the station to the College, it was "quite sufficient to enable all to appreciate the bleakness of the situation, for wind and drizzling rain were sweeping across the heath with vindictive keenness, and altogether the appearance of things was as cheerless and unpromising as well could be." Prior to the opening day the five or six masters assembled and some sixty boys, having found their way to the College with difficulty, for there were no roads completed, and much of the land was a perfect slough. The season was a wet one, and the building very incomplete. Under these conditions I was appointed to undertake the medical charge of the institution. A few days before the boys assembled I went over to the place on a tour of inspection, and met the present Archbishop of Canterbury, who had been appointed head master. We made each other's acquaintance, the one not knowing in the least who the other was till we announced our respective names. The look of things was not encouraging; but we got over the first term without any very alarming illness. Some cases of pneumonia and bronchitis were our chief sources of anxiety, and a distinctly malarial form of "recurrent febricula" cropped up, and in this as in subsequent terms for years was very prevalent, accompanied by the peculiar form of progressively developing sore-throat, in its mild and benign form as a rule, but occasionally in its malignant form, and this has been a feature at Wellington College from the time the building was first tenanted, in 1859, to 1891, when it appears to have reached its most virulent phase, necessitating the dispersal of the school for part of one term and the whole of another. To trace the slow, but surely progressive, nature of the affection it is necessary to recognise its association with the peculiar forms of recurrent feverishness to which the boys were liable from the commencement of the College, and which also affected the able-bodied convicts who were sent to Broadmoor Asylum to labour at the trenching and other earth-works which had to be done before the asylum was fit for the lunatic inmates. These able-bodied convicts I had the charge of, and thus was afforded an opportunity of comparing their maladies with those at Wellington College.

The recurrent feverish attacks to which the boys and convicts were both liable were of a distinct malarial type. The sparse population of the district anterior to the appearance of Wellington College and Broadmoor Asylum consisted of a peculiar race of hardy natives who became celebrated in Kingsley's works, and were known as broom-dashers, as their sole occupation was making heath brooms, which in the process of construction are dashed against a block of wood to give them shape and firmness; hence, I presume, the name "broom-dasher" arose. They were a peculiar, uncultivated race of the gipsy type. They lived in huts made of turf, with no flooring but the bare ground. Ague was common among them, as indeed it was all around this district and the adjacent portion of Hampshire.

But Dr. Bristowe, in his report to the Governors of Wellington College, states that there is no malaria. He can know but little about the disease tendencies of the locality. He states in his report to the Governors that "the term malarious as applied to the district is wholly inaccurate and misleading." If Dr. Bristowe would do me the favour to pay me a visit I would take him to see a patient who had distinct ague, and he shall hear it from the patient himself and listen to an accurate description of an ague fit. When the South-Eastern Railway was being constructed through the portion of the country where Wellington College now stands the navvies suffered very much from ague. *The Times* article above referred to states that Wellington College "faces immediately" on Hampshire, and Hampshire is known to have been distinctly malarious, and is one of the few counties named as indubitably so. Dr. Bristowe, in his article on Malaria, draws largely from Sir Thomas Watson's lectures. Watson states that malaria may be present one month in a locality and absent the next; yet Dr. Bristowe, from a few visits in one month of the year, and the least likely month for malaria to display itself, draws his sweeping conclusion that there is no malaria in the locality. James I. and Oliver Cromwell both died of ague contracted in London, and it is no more disparagement to Wellington College to say that ague occurred than it is to London to say it was once very malarial, and that still in London as at Wellington College a distinct malarial taint can be traced in some cases of acute disease playing through the other symptoms as distinctly as the treble in a chorus. So long as the authorities of Wellington College shut their eyes to these facts, so long will they fail to realise the true nature of much of the illness there, and to this error Dr. Bristowe lends his name and authority. There is a distinct association between the malarial disposition and the Wellington College sore-throat, and the malignant septicæmia which has occurred there in excess of any other locality of the same population in the country, which I will hereafter point out more in detail.

(*To be continued.*)

THE INFLUENZA.

So far as can be gleaned from the reports in the daily press, there is no appreciable abatement in the epidemic of influenza, for although the disease is leaving some districts it is still spreading in other parts of the country. In the metropolis there is no question as to the great prevalence of the malady; but none of the hospitals seem to be so overwhelmed with cases as they were during the first week of 1890. However, there is much sickness from bronchitis and pneumonia, of which several cases must be attributed to an antecedent attack of influenza, without any correspondence in severity between the primary illness and its sequel. The Registrar-General's returns for the week ending Jan. 23rd show, as regards mortality, a great increase in the deaths primarily attributed to influenza in London—viz., 506—the number for the previous week being 271; and in addition there were 86 cases in which influenza was returned as a secondary cause. The latter figure is of course only approximate, for it appears that the deaths referred to diseases of the respiratory organs rose to 1465, or 868 in excess of the corrected average. Turning to the general death-rates of the large towns of England and Wales, it is remarkable to find the list headed by a town which in its annual rate is very near the other end of the scale. This is Brighton, where the death-rate last week was as high as 60·9 per 1000. In mitigation of this exceptional mortality, which can only be ascribed to influenza and its complications, it must be observed that this town is the nearest health resort to London, and has doubtless received more invalids than customary this winter. Dr. Newsholme, the medical officer of health for Brighton, has prepared a special report on influenza, which describes in a succinct and readable manner what is known concerning its nature and mode of propagation, with timely suggestions as to precautionary measures to be taken in households where cases may arise. Dr. Newsholme, speaking of the high rate of mortality, due, in his opinion, chiefly to the excessive mortality among aged and invalids from the sequelæ of influenza and other causes, draws especial attention to the risk of drawing false inferences from noting only one week's returns. But it may be remarked that the average death-rate for Brighton during the past four weeks has been no less than 46·9, whilst London (which last week had a mortality of 46) gives an average for the same period of 40·2. Influenza is said by the medical men at Brighton to be declining, and the present high death-rates are largely due to the attacks of

previous weeks. There has been a decline in the rate at Portsmouth, which was 44·3 last week; but Norwich has advanced from 40·1 to 44·7. The lowest rates were in Huddersfield, 17·3; Leicester, 19·1; Nottingham, 19·4.

In the Home Counties influenza is still very prevalent, especially in Essex and North Kent; and in Berkshire, Herts, and Bedfordshire fresh cases continue to occur.

Dr. Thresh, medical officer of health of the Chelmsford rural sanitary district, writes:—"In both the rural and urban districts this disease is very prevalent and of a severe type. In the Chelmsford rural district three schools have had to be closed for lack of scholars. The death-rate for this district during the past three weeks has been at the rate of over 50 per 1000. More deaths from influenza have occurred this month, so far, than during the whole of last year. The majority of those who succumb are over sixty-five years of age. The epidemic is extending in all the districts." Dr. Thresh has issued a special report, and advises exactly the same precautions to be taken with patients suffering from influenza as would be taken if they were known to be suffering from scarlet fever.

On the whole, it seems to be less prevalent in Dorset and Hants, but only this week has it appeared in North Somerset, although it has been longer prevalent in other parts of the county. Thus a medical man at Martock writes:—"Influenza is rampant. . . The cases this year in our neighbourhood are, as a rule, very severe, and relapses are very common, whilst, as complications, pneumonia of an insidious type is often met with. Bronchitis is very frequent, especially among old people. More common than pneumonia, and about as frequent as bronchitis, is gastro-enteric disturbance of a more or less severe character. . . . In some cases the abdominal pain and diarrhœa are extreme."

In Leicester we are informed that "influenza still remains comparatively mild, and does not extend with any great rapidity. No deaths were recorded last week, and the deaths from respiratory diseases, as well as the general mortality, remain unusually low." Less reassuring statements come from Northampton, where it has recently broken out, although for some time it has been prevalent in the district. In Huntingdonshire and Cambridgeshire, as well as in Norfolk and Suffolk, there does not seem to be any appreciable abatement. The epidemic is spreading in Lincolnshire and in the North Riding of Yorkshire. It is also on the increase in Liverpool.

On the Continent influenza is still prevalent in Paris and the South of France, notably Lyons; but it is abating in the northern departments. It is also subsiding in Italy, and has almost ceased at Malta and in most parts of Germany, although it is still very severe at Mecklenburg. There is a decrease in its virulence in Copenhagen, but it has appeared with considerable severity at Christiania, Bergen, and other parts of Norway. It has once more appeared at St. Petersburg, and is very severe in Odessa and South Russia generally.

A piece of intelligence which we are not able to confirm comes from Berlin, in the letter of the *Standard's* correspondent (Jan. 20th)—viz., that an International Influenza Conference is to be held in London in March, with Sir W. Jenner as president. The number of deaths in Berlin from influenza, not counting its sequelæ, from the beginning of last November till the New Year was 411. Eight of the fifteen normal schools in Saxony are closed owing to influenza. The number of cases officially determined in Vienna from the 3rd to the 9th inst. was 521. Dr. Ripperger of Munich has published a book entitled "The Influenza, its History, Epidemiology, Etiology, Symptomatology, Treatment, Complications, and Sequelæ." It gives an account of all the influenza epidemics on record since 1387. The number of references is over 3000.

As to other parts of the world, there is still much sickness from this cause in the United States, and this week has brought information of an outbreak at Cape Town.

YELLOW FEVER ON A MAIL STEAMER.—Messrs. Shaw, Savill, and Albion Company's steamer *Arawa* arrived at Plymouth on the 21st inst. Owing to yellow fever having broken out on board after leaving Rio on the 3rd, the vessel will be detained in quarantine, and has been ordered to proceed to the Mother Bank under yellow fever signals. The mails were fumigated and forwarded to London by special train.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. George, Hanover-square.—The corrected death-rate for this parish during 1890 was 14·56 per 1000 of the inhabitants; but Dr. Corfield does not accept the official census, because it was made to depend on a Sunday night, when many of the inhabitants are always away, and because of the Easter holidays, which also largely interfered with the residence or not of many of the parishioners in their own homes. During the last sixteen years the mean length of life has averaged nearly 54 years in this parish; it has also gradually increased, and for 1890 it is set down at 62·67 years. The zymotic rate was 1·6 per 1000. The report, which is mainly statistical, concludes with an account of the general sanitary work of the year.

Ampthill Parish.—Dr. J. H. Garrett presents a special report on this parish, as to which he gives a very complete account, beginning with its topography, geology, &c., and containing a detailed description of all the prevailing sanitary circumstances. Evidently the place stands in need of much sanitary reform: its sewerage is very faulty, the closet accommodation is most unsatisfactory, and a public water-supply is urgently required. Ampthill possesses certain very marked advantages of site and soil; and it is much to be hoped that the careful report compiled as to its advantages and its many wants will induce the sanitary authority to do their duty towards the parish, and free the place from all those conditions which tend to unhealthiness. What that sanitary authority is to be remains to be seen, for opposition has been raised as to the constitution of a local board district. Dr. Garrett's report shows that the wants of Ampthill are essentially local ones, and the place seems certainly to be sufficiently compact to justify the formation of a local body that will have more interest in its sanitary circumstances than has been shown, since the passing of the Public Health Act (1875), by the guardians, who are scattered all over the union, and have other things to think about than the wants of this special parish.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6328 births and 6884 deaths were registered during the week ending Jan. 23rd. The annual-rate of mortality in these towns, which had been 28·7 and 33·0 per 1000 in the preceding two weeks, further rose last week to 35·4. In London the rate was as high as 46·0 per 1000, while it averaged only 27·6 in the twenty-seven provincial towns. The lowest rates in these towns last week were 17·3 in Huddersfield, 19·1 in Hull and in Leicester, 19·4 in Nottingham, and 19·8 in Halifax; the highest rates were 40·0 in Liverpool, 44·3 in Portsmouth, 44·7 in Norwich, 46·0 in London, and 60·9 in Brighton. The 6884 deaths included 518 which were referred to the principal zymotic diseases, against 549 and 604 in the preceding two weeks; of these, 254 resulted from whooping-cough, 124 from measles, 41 from diarrhœa, 38 from diphtheria, 32 from scarlet fever, 26 from "fever" (principally enteric), and 3 from small-pox. No fatal case of any of these diseases was registered in Halifax, while they caused the lowest rates in Portsmouth, Plymouth, and Gateshead, and the highest rates in London, Derby, Liverpool, and Swansea. The greatest mortality from measles occurred in Derby, Liverpool, and Swansea; from scarlet fever in Swansea; from whooping-cough in Wolverhampton, Brighton, Bolton, Oldham, London, Blackburn, and Derby; and from "fever" in Salford. The 38 deaths from diphtheria included 23 in London, 2 in Croydon, 2 in Norwich, and 2 in Newcastle-upon-Tyne. Three fatal cases of small-pox were registered in Liverpool, but not one in London or in any other of the thirty-three great towns; 6 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 2 in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London

Fever Hospital at the end of the week was 1397, against numbers declining from 1554 to 1391 at the end of the preceding seven weeks; 116 new cases were admitted during the week, against 104 and 92 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 1084 and 1248 in the preceding two weeks, further rose last week to 1465, and exceeded by as many as 868 the corrected average. The causes of 111, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bolton, Oldham, Newcastle-upon-Tyne, and in four other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Swansea, Sheffield, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding four weeks from 27·1 to 23·9 per 1000, rose again to 27·2 during the week ending Jan. 23rd, but was as much as 8·2 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 21·8 in Edinburgh and 23·7 in Paisley to 29·7 in Greenock and 31·9 in Dundee. The 756 deaths in these towns included 24 which were referred to whooping-cough, 13 to diarrhœa, 11 to measles, 10 to scarlet fever, 9 to diphtheria, 5 to "fever," and not one to small-pox. In all, 72 deaths resulted from these principal zymotic diseases, against 58 and 50 in the preceding two weeks. These 72 deaths were equal to an annual rate of 2·6 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three English towns. The fatal cases of whooping-cough, which had been 22 and 16 in the preceding two weeks, rose again last week to 24, of which 10 occurred in Glasgow, 5 in Aberdeen, and 4 in Paisley. The 13 deaths from diarrhœa showed a slight further increase upon recent weekly numbers, and included 9 in Glasgow. The 11 fatal cases of measles exceeded by 7 the number in the previous week; 9 occurred in Glasgow and 2 in Edinburgh. The deaths from scarlet fever, which had been 4 and 7 in the preceding two weeks, further rose to 10 last week, of which 8 occurred in Glasgow. The 9 fatal cases of diphtheria showed an increase of 4 upon the number in the previous week, and included 4 in Glasgow and 3 in Aberdeen. The 5 deaths from "fever" were below those recorded in any recent week. The deaths referred to diseases of the respiratory organs in these towns, which had been 200 and 226 in the preceding two weeks, were 230 last week, and exceeded by 20 the number in the corresponding week of last year. The causes of 53, or more than 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 35·0 and 43·8 per 1000 in the preceding two weeks, further rose to 54·1 during the week ending Jan. 23rd. During the first three weeks of the current quarter the death-rate in the city has averaged 44·3 per 1000, against 39·6 in London and 22·1 in Edinburgh. The 363 deaths in Dublin during the week under notice exceeded by 69 the number in the preceding week, and included 10 which were referred to whooping-cough, 5 to "fever," 2 to diphtheria, 2 to diarrhœa, 1 to measles, and not one either to small-pox or scarlet fever. In all, 20 deaths resulted from these principal zymotic diseases, equal to an annual rate of 3·0 per 1000, the rate during the same period being 3·7 in London and 1·8 in Edinburgh. The fatal cases of whooping-cough, which had been 10 and 5 in the preceding two weeks, rose again to 10 last week. The deaths referred to different forms of "fever" (principally enteric), which had been 5 and 2 in the previous two weeks, rose again to 5 last week. The two fatal cases of diphtheria exceeded the number recorded in any week since September last. The 2 deaths from diarrhœa were within one of the number in the preceding week. The 363 deaths registered in Dublin last week included 47 of infants under one year of age, and 147 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons showed a marked further increase upon recent weekly numbers. Three inquest cases and one death from violence were registered; and 163, or nearly one-half, of the deaths occurred in public institutions. The causes of 24, or nearly 7 per cent., of the deaths in the city were not certified.

THE SERVICES.

Surgeon-Lieutenant-Colonel J. G. Rogers, M.B., D.S.O., has vacated his appointment in the Egyptian Army.

ARMY MEDICAL STAFF.—The surname of Surgeon-Major-General D. A. C. Fraser, M.D., placed on retired pay in the *Gazette* of Jan. 12th, 1892, is as now, and not as therein stated; Surgeon-Colonel Alfred M. Tippetts to be Surgeon-Major-General, vice D. A. C. Fraser, M.D., retired, and Brigade Surgeon-Lieutenant-Colonel William C. Robinson to be Surgeon-Colonel, vice A. M. Tippetts (both dated Dec. 27th, 1891); Surgeon-Lieutenant-Colonel William McWatters to be Brigade Surgeon-Lieutenant-Colonel, vice S. E. Maunsell, deceased (dated Dec. 16th, 1891); Surgeon-Lieutenant-Colonel Robert N. Mally to be Brigade Surgeon-Lieutenant-Colonel, vice W. C. Robinson (dated Dec. 27th, 1891); Surgeon-Captain John Lees Hall, from half pay, to be Surgeon-Captain, vice T. F. W. Fogarty, M.B., deceased (dated Jan. 3rd, 1892).

ARMY MEDICAL RESERVE OF OFFICERS.—The Queen has been graciously pleased to approve of the following alterations of designation in the rank of Officers of the Army Medical Reserve of Officers (dated Jan. 1st, 1892):—Surgeons-Major (ranking as Lieutenant-Colonels) to be Surgeon-Lieutenant-Colonels; Surgeons-Major (ranking as Majors) to be Surgeon-Majors; Surgeons (ranking as Captains) to be Surgeon-Captains.

INDIAN MEDICAL SERVICE.—*Madras:* Surgeon-Colonel T. N. Hoyated, Administrative Medical Officer, Sirhind District, Bengal, succeeds Sir James Hanbury as Principal Medical Officer of the forces in the Madras Presidency.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Surgeons: Robert Hardie, M.B., to the *Cossack*, Edward Cuffey, M.B., to the *Pigeon*, and John A. Robinson, M.B., to the *Starling* (dated Jan. 29th, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Midlothian: Lieutenant William Thomas Crawford, M.B., is appointed Surgeon-Lieutenant (dated Jan. 23rd, 1892).

Correspondence.

"Audi alteram partem."

THE INFLUENZA.

To the Editors of THE LANCET.

SIRS,—Amongst the vagaries of influenza perhaps no complications are more puzzling, and at times give more anxiety to the practitioner, than the exanthematous forms which have been observed in this and other epidemics. Rashes quite typical of scarlet fever or measles have been frequently reported. My neighbour, Mr. Ward, medical officer of health for Harrogate, tells me that he has attended at least six cases simulating scarlatina so closely as to give him anxiety in the early stages until he was able to exclude all but influenza as a cause.

A case which I am still attending shows clearly that a rash, having all the outward appearances of measles, may occur in the course of influenza. The patient, a young married lady, sent for me on the 18th inst., complaining of diarrhœa and sickness, together with pains all over the body, but chiefly on the left side of the chest. There was no temperature and no rash. The pains had been present, more or less, for five days previously. Next day I was surprised to find the patient's face and neck flushed, swollen, and covered by a roseolar, measly rash, which also extended over the chest, arms, and body. Still no temperature. A saline aperient was administered in order to help the elimination of poison from the blood. By the following day the rash had considerably faded, and the face and neck were much less swollen. Now, since the 20th inst. the rash has practi-

cally disappeared, excepting on the left side of the chest. Here a recrudescence has taken place limited to an area bounded by a vertical line drawn posterior to the axilla behind, a little to the left of the sternum in front, and from about the third to the eighth ribs. The so-called rheumatic pains, though at first general, have now concentrated themselves to the space above described, but have increased in severity so as to be spasmodic in agony. A nerve storm appears to come on with regularity every evening and early part of the night. One cannot help of course being strongly reminded of "herpes zoster," though the papular stage only has been reached, and there is no sign of vesicles forming. "Herpes zoster" itself has been mentioned among the sequelæ of influenza. My patient is of hysterical, neurotic type, and the menses are very irregular, so that neuralgic affections are not uncommon with her.

Another complication of influenza to which I scarcely think sufficient attention has been directed is "infection of the endocardium." I have seen four cases. Perhaps the prevailing symptom in all was a pretty high temperature—say, 101° to 103°—tending to be maintained for several days, and to relapse unless antipyretics were steadily given. Catarrhal symptoms were also present, but not pronounced. No complaint of pain over the precordial region was specially noticed, but faintness, as if for want of food, was observed. This, and a sort of suspicion that the case was not progressing as well as it ought, made me examine the heart, when a soft murmur with the first sound was usually heard about mid-sternum and towards the apex; in one case over the second left cartilage. The first patient in which I observed this condition of heart during an attack of influenza was an active, athletic young man. I was very much disappointed at finding the valvular trouble (thinking it was old and rheumatic), and gave a rather gloomy opinion as to the probability of his entirely recovering from it. However, I was agreeably astonished to discover that the heart had completely righted itself in about a month after the attack. In the other three cases I found that the time required was about three weeks, and I boldly predicted the return to health in the last two! During the valvular implication it would seem quite impossible to distinguish influenza from rheumatic fever by any examination of the heart. It would be a great comfort to one, therefore, to know if other observers can corroborate my own experience, that the endocarditis of influenza is erythematous and evanescent as compared with the plastic and more permanent mischief of rheumatic fever. In view of the recent discovery of a microbe which is specific to influenza, it is interesting and instructive to compare the miasmatic theory of Sir D. Maclagan as a cause of rheumatic fever, and which led to the introduction of the famous salicine treatment. Many observers, myself included, have found salicine and its compounds equally efficient in the struggle against influenza. In controlling the fever of the latter it is evidently necessary, not only that one should use an antiseptic form of antipyretic (e.g., salicine, antipyrin, phenacetin), but that the drug should be continued in its full dose, but less frequently, for a few days until the temperature has become steadily normal. Relapses are more frequent, or complete convalescence is retarded, where this plan is not carried out. Judging from several points of analogy which may be noted between measles, scarlatina, rheumatic fever, and influenza, it seems probable that their microbes come at least from the same genus, if not the identical species or family. Might not any differences in form of such microbes which belong to one genus help us to understand why some of our specific remedies are more adapted than others to meet the several requirements—e.g., fever, pain, sickness, and diarrhœa, or catarrhal symptoms? For the latter, for instance, I have found antiseptic balsams, such as guaiacum, benzoin, and tolu, made into an emulsion with tragacanth, of immense service. The addition, in some cases, of ipecacuanha wine or, in gouty congestion, of colchicum wine has also proved most helpful. Herpes zoster itself has been thought by some observers, such as Dr. Byrom Bramwell, to be of microbic origin, though I am not aware that the individual has been discovered. The pains of this affection, and its allies of influenzal type, are so intense and persistent that one would be glad to have a remedy certain to quell and cure it without having recourse to opium.

In connexion with the exanthematous forms of influenza I was struck with a statement made by my friend, Dr. H. E. Armstrong, medical officer of health for Newcastle-on-Tyne, a few days ago. He said that during the last quarter of 1891 the mortality of "measles" had been eight times greater than that of "scarlet fever." This does not seem to be in accord with one's general idea of the comparative gravity of these affections. It occurs therefore to me to ask whether cases are not being returned as measles which are in reality influenza *with a rash?* Parents are often very careless in regard to children with measles, allowing them to run about out of doors as if nothing were the matter. Under such circumstances influenza with a rash like measles would be very likely to run into fatal complications.

I am, Sirs, yours faithfully,

J. GORDON-BLACK, M.D.Lond.

Harrogate, Jan. 26th, 1892.

To the Editors of THE LANCET.

SIRS,—One of the most distressing and one of the most persistent symptoms present in the cases of influenza at present prevalent has been the occurrence of severe cough. This I have frequently observed to be out of all proportion to the amount of bronchitis present and to have remained to harass the patient's rest when the physical signs in the lungs had entirely disappeared. These facts, along with its paroxysmal nature, must have suggested to many the analogies between the condition and that of whooping-cough, which of late years has more and more come to be recognised as due to some nervous lesion. Seeing the very striking effects which the cause of influenza has upon the nervous system, is it unreasonable to suppose that the cough may be of nervous origin? A case which I have had under my care still further confirms this idea, and presents, I think, a therapeutic suggestion. In a lady recovering from influenza and suffering from this paroxysmal cough, a hernia which had formerly been reducible showed signs of strangulation, and required an operation, which was performed under chloroform as the anæsthetic. The patient made an excellent recovery, and never during convalescence again suffered from her former distressing symptoms—in fact, rarely coughed at all. Now, while I do not think it would be justifiable to chloroform every patient thus suffering, still, action along the same lines may be taken, and I have tried with good effect an inhalation consisting of one drachm of chloroform, two drachms of oil of cinnamon, and three ounces of rectified spirits of wine—a little to be occasionally put on blotting-paper, placed beneath the chin of the patient, who is enjoined to breathe quietly. The small quantity of chloroform which can be present in any inhalation suggests that it acts by soothing the terminations of the vagi in the bronchial passages, and not by any general influence.

I am, Sirs, yours truly,

Oxford, Jan. 25th, 1892. H. P. SYMONDS.

To the Editors of THE LANCET.

SIRS,—Now that the influenza is raging everywhere, and every practitioner is engaged in battling with it, I thought that some of the observations I made during the epidemic of 1890 as compared with those of the present year might be of use. During the epidemic of 1890 I was acting temporarily as superintendent in a large London infirmary, where the number of patients averaged 520, and when during the three months of December, January, and February, if I remember rightly, about 200 cases occurred either amongst the patients already in the building or who were admitted suffering from the disease and were placed in the general wards, no attempt being made at isolation.

The first point one notices between the attacks occurring then and now is that in the former gastric catarrh accompanied with persistent vomiting for the first twenty-four hours was very common, and that bronchial catarrh, if present, was slight and evanescent; whereas now in the great majority of cases bronchitis of more or less severity is present and persists for some time, with considerable elevation of temperature. In addition a few of the present cases show gastro-intestinal catarrh with profuse diarrhœa and jaundice. Observations in the previous epidemic showed that the majority of patients were young adults (from twenty to forty), neither the very young nor the old being affected in anything like the same proportion, although the bulk of the patients in the building were elderly people suffering from chronic

chest complaints, a very small proportion of whom were attacked; this being rather against the idea that disease of the respiratory organs renders the patient more susceptible to the disease. Patients who were far gone in phthisis, too, seemed to escape the disease, possibly because the high temperatures they had rendered the soil unsuitable to the microbe of influenza. In very few cases indeed did pneumonia supervene, and very few cases succumbed. Amongst the children a few cases occurred; but then, as at the present time, they had few complications, the attack consisting in a sudden onset of giddiness, high temperature, vomiting for a few hours, and bad headache, the usual complaints of general aching and severe pain in the lumbar region being wanting. Usually the temperature began to fall within thirty hours, and was normal by the third day, and was not followed by anything like the same amount of depression as amongst the adults. As to sex, we found they were affected in nearly equal numbers, females slightly predominating.

In the earlier cases the temperatures rarely exceeded 103°, but later cases always reached 104°, and many 105°, or over. The infectious nature of the disease was shown by the large number of nurses who fell victims, those having anything to do about the patients being attacked, whereas patients sleeping in adjoining beds remained free. I can only remember one case where a patient was affected in the next bed, although from its infectious nature we might have expected to see it progress round the ward from bed to bed; and its not doing so must be attributed to good ventilation and an ample cubic space per patient. This explains, too, why isolated cases occurred in wards containing thirty-two beds, none of the other patients contracting it, so that the poison seems to be like that of typhus fever, easily rendered innocuous by dilution. As regards the incubation period, I have lately had a case in private where A was taken ill, and precisely six days later B fell a victim, this patient having two children sleeping in the room with her, neither of whom had had any communication with A, and were not even allowed on the same floor, both of whom were attacked twenty-four hours after B's symptoms began. This coincides with observations reported in Dr. Sisley's book; and inasmuch as the children had been confined to the house, their source of infection seems clear. That we should isolate every case at once, as in any of the other infective diseases, is imperative; and if we can remove our patients to a top floor, and use a carbolised sheet over the door, it seems most desirable to do so. Then the question arises, How long after convalescence is the patient infectious, this being a question that is put to us daily, and which no authority to which I have access gives any clue? It seems safe to conclude that as long as any cough lasts the infection continues; but this is an unsatisfactory guide, for a patient may keep his cough for three or four weeks, and will certainly not submit to quarantine for that period. Are we safe in setting an arbitrary limit of from ten to fourteen days? After convalescence it seems desirable to disinfect the rooms; and this may be done rapidly by vaporising cresolene or by having the windows opened for two or three days, and the bedding &c. well aired.

Another question arises as to whether the disease can be conveyed by a third person who is not himself suffering from the disease. Doubtless, if the third person carries away on his dress mucous or nasal discharges, as in the case of whooping-cough, it can be conveyed, but otherwise there seems to be little danger. It is to guard against this possibility that at some of the infirmaries these patients are isolated at once and have special nurses provided, who are not allowed to mix with the others or attend in the general wards; and the results of this care will be watched with interest by all practitioners, who are naturally interested in staying the present plague and acting in the best interests of their patients.

I am, Sirs, yours truly,

RAINSFORD F. GILL, M.D. Lond.

Adelaide-road, N.W., Jan. 25th, 1892.

To the Editors of THE LANCET.

SIRS,—During this epidemic I have used nothing else but bicarbonate of potash, giving it, as recommended by Mr. Crerar, in half drachm doses in milk every three hours, as long as the fever lasted. Last epidemic I gave salicylate of soda with bromide of ammonium after an injection of apomorphia or an aperient, and the bicarbonate treatment I find by far the best. I would not go so far as to say, with Mr. Crerar, that it destroys the power of the disease within twenty-four hours. There appears to be no limit to the amount which may be given, for a gentleman between seventy and eighty years of age took twenty-one powders in sixty-eight hours without any depressing effect if accompanied with stimulant. The temperature then being normal, no more were given for some hours, when, the temperature rising to 102°, the treatment was recommenced, with the result that in about twelve hours the body heat was 99°. This plan of treatment saves much writing, dispensing, and sending out medicines on one's return home, for one simply takes a packet of powders. A powder can be divided for a child and made into four for a baby. In all cases I order a milk (perhaps with soda water) diet only, and insist on champagne or whisky every three hours. Many have said to me that they feel, in about ten minutes after taking a powder, the feverishness much lessened, remaining so for an hour or more. I see that salicylate of antipyrin and benzole are highly recommended. I trust, if we are to have any more of this wretched epidemic, an acute fever of the nervous system, a more perfect plan of treatment than there seems to exist will be found. For the cough, headache, backache, and other aches accompanying influenza and its convalescence I find a pill of a quarter of a grain of cannabis indica very useful with adults, given every hour, if necessary, for a consecutive six hours or more.

I am, Sirs, yours faithfully,

Canterbury, Jan. 25th, 1892. PUGIN THORNTON.

P.S.—Has anyone not using drugs trusted to body-sponging for reduction of temperature?

To the Editors of THE LANCET.

SIRS,—Though unwilling to add to the long list of reputed remedies for influenza, after seeing Dr. Althaus' letter in THE LANCET of last week advocating the use of the salicylate of antipyrin, I would like to call your attention to salicylate of bismuth, which I have used extensively during the last and also the present epidemic, with marked benefit. It is especially valuable in two classes of cases—namely, in young children, and also in those cases where gastro-intestinal symptoms are troublesome, one dose usually being sufficient to allay the vomiting. Though I have carefully examined for toxic symptoms, and inquired after them, I have found none, which is by no means a small advantage. It is administered in a mixture suspended in mucilage and flavoured with orange, lemon, or ginger, &c.

I am, Sirs, yours truly,

HERBERT H. HORDEN, M.D., L.R.C.P.

Water-lane, Jan. 27th, 1892.

THE MEDICAL DEFENCE UNION.

To the Editors of THE LANCET.

SIRS,—I have already told Dr. Phillips that I do not quite recognise my speech in his report, and I certainly did not mean to accuse Dr. Woods of imputing *mala fides* to anyone. If you will allow me, I should like to state my argument thus. The Medical Defence Union is admittedly very useful, but it can only be managed successfully by a strong and permanent council. This council must have the confidence of the members, and those who cannot trust it had better secede. There is plenty of room for a second organisation working on similar lines, and the difficulties of management are diminished where the organisation is confined to one locality and the office-bearers have personal knowledge of the men with whom they have to deal. I believe a thousand members is quite large enough for stability and efficient working.

I am, Sirs, yours faithfully,

Birmingham, Jan. 23rd, 1892. ROBERT SAUNDBY.

PATHOLOGICAL CONDITIONS IN THE MAMMA ASSOCIATED WITH CANCER.

To the Editors of THE LANCET.

SIRS,—Mr. Roger Williams remarks that the changes described in the breast tissue, apart from the carcinomatous tumour, by Mr. Johnson and myself at the Pathological Society on Jan. 5th, were known to Sir Astley Cooper; but the passages which he quotes from that surgeon's works do

not prove this. They alone show that he was aware of the well-known invading character of scirrhus, and was familiar with the lengthened prolongations spreading outwards from the more localised mass, a condition so frequently found, but one entirely aside from the subject of the papers. Also, the primary origin of scirrhus in outlying parts of the breast was not under discussion. Shortly before reading my paper I heard of Heidenhain's work, but had not had an opportunity of referring to it. His observations and the conclusions which he arrived at are apparently much the same as those to which I was led. My friend Mr. Johnson did refer to Heidenhain's observations on the pectoral fascia. I take this opportunity to correct an obvious printer's error in your report in THE LANCET on page 90—viz., œdema for adenoma. I am, Sirs, yours truly,

CECIL F. BEADLES.

London County Lunatic Asylum, Colney Hatch, N., Jan. 24th, 1892.

SANITATION AT CALAIS.

(FROM OUR SPECIAL CORRESPONDENT.)

ABOUT three hundred thousand travellers cross the Channel and pass through the town of Calais during the course of the year. In the year 1889, in consequence of the Paris Universal Exhibition, the actual number of passengers who availed themselves of the Calais route amounted to 332,230 during the first eleven months of that year. This enormous figure suggested the advisability of some inquiry as to the sanitary condition of Calais. In THE LANCET of Dec. 21st, 1889, the result of the investigations made at that time were published. Two years have now elapsed, and on again going over the same ground I am pleased to be able to report progress. The articles published by THE LANCET were carefully translated into French by an official of the Calais municipality, and read and studied by the local authorities, with the result that the work of sanitary improvement has been pressed forward with considerable energy. It may be remembered that, writing from Calais at the end of the year 1889, I described how the old historic town of Calais had been united to the new industrial suburb of St. Pierre, where are situated the celebrated tulle manufactories. The total population was 58,000, of whom 44,000 belonged to St. Pierre. Of these, 5000 were foreigners, comprising some 1500 British subjects, who are residents permanently established in Calais. The town is provided with pure though somewhat calcareous water from Guines, but a certain number of private wells still exist; and I must repeat to-day what I said two years ago—namely, that the authorities should be armed with power to close all such private wells. Fortunately, however, Calais is so low—some portions of the town being below the level of the sea—that the water in these private wells is often brackish; it can, therefore, only be used for cleaning purposes.

The general aspect of Calais and St. Pierre has greatly improved. Formerly there were hardly any sewers. The slop water from the houses flowed into the streets; if there was a sufficient fall, and the gutter was not blocked, it gradually found its way into the port, but very often the slop water stagnated in the streets, formed pools of fermenting matter, and gave off objectionable odours. Some sewers had, however, been constructed of late years, amounting in 1889 in total length to 6320 metres. Since then—that is to say, in the brief space of two years—sewers to the extent of 4540 metres have been added. This is a notable improvement, and brings the total length of the Calais sewers up to the respectable figure of 10,860 metres. Most of these sewers are eighty centimetres in width, and made of compressed concrete. At distances not greater than fifty metres one from the other, and on both sides of the streets, are openings from the gutters to the sewers. The slop water from the houses still runs into the gutters, but it soon finds its way to the sewer, and no longer stagnates in the street. This is in one sense preferable to draining into the sewer, for there is no direct communication from the houses to the sewers, and no danger of the sewer air travelling up the drain pipes into the houses. The sewers ventilate into the open streets. The new sewers are also very useful in preventing the floods that frequently occurred in some parts of the town. The greater portion of the sewers built since 1889 have their outfall in the tidal basin of the port; but some of the sewage falls into the canal near the citadel. There it is locked in until such time as the condition of the tide admits of the canal water being run out into the harbour. To drain into a harbour is bad enough, but to drain into a canal is infinitely worse. Monsieur A. Dagniault, the town engineer, explained that it was impossible to manage otherwise. A great portion of Calais being below the level of the sea, it was not possible to obtain a fall in other directions. Of course what is needed is a pumping station to raise the sewage, and thus to artificially create the necessary fall. The new Calais, which includes St. Pierre, is surrounded by fortifications and a moat. The old Calais is surrounded by huge docks and by canals, and to construct a main sewer through this double series of obstacles is no easy matter. When the new fortifications and the new docks were built, no one seems to have thought of making any sort of provision for the drainage of Calais; yet it might have been foreseen that as the population increased, as the knowledge of sanitation spread, objections to draining into the port would become more and more emphatic.

For the moment, however, the population of Calais is not increasing; on the contrary, there has been a notable decrease in the number of inhabitants. This is due to the termination of the greater part of the works for the building of the fortifications, new harbour, and docks. Also, the tulle manufactories not having prospered of late, a great many of the hands have had to seek work elsewhere. A large proportion of these artisans have obtained employment in Poland, principally in the neighbourhood of Warsaw, where certainly they will not find better sanitation than at Calais. According to the census taken on May 31st, 1886, there were 58,969 inhabitants at Calais and St. Pierre. The census taken on April 1st, 1891, showed that the population then amounted to only 56,867. This is a falling off of 2102 persons; but, as during the last two years there have been 1206 more births than deaths, we may conclude that at least 3300 persons have left Calais in that lapse of time. Many of them were Italian navvies whose labour at the new port was no longer required. For a town so sparsely populated—all the new streets are broad, the houses low, and many of the streets mapped out are not yet built upon—the death-rate is high. It amounted to about 22·2 per 1000 in 1889 and 22·9 per 1000 in 1890. Calais is healthily situated, constantly exposed to the fresh sea breeze, swept and purified by the four winds of the heavens; still Calais has a death-rate much higher than London, notwithstanding the overcrowding, the vice, the misery, and the fearful fogs of our great metropolis.

Calais, moreover, retains cesspools. These are emptied with some care by pneumatic suction. This is not produced by a portable steam engine, as in Paris, but by a hand-pump. In Paris the air escaping from the cesspool is passed through the fire of the engine and thus rendered innocuous. At Calais a special fire is lit in the street in a very simple contrivance the shape of a handbell or of an inverted wineglass. The bell part is put on a smooth piece of ground or pavement. An aperture in the centre enables a pipe to be screwed on which joins the pipe that is laid from the portable tank to the cesspool. The upper part of the apparatus, which I might call the handle of the bell, is a circular metallic tube about four inches in diameter and a foot long, perforated on all sides with small holes. At the bottom there is a little grate. This pipe is filled with charcoal, and when the charcoal burns it consumes the air escaping from the cesspool by the pipe which brings it to the bell portion of the apparatus beneath the fire. In this way a cesspool can be emptied in the daytime without causing a nuisance. The contents of the cesspool are then conveyed to tank-barges, which, by canal, travel to Belgium, where there are large works for the manufacture of human guano. Needless to observe, the emptying of the cesspools costs each householder a certain sum, which sum, paid as a tax for sewers, would probably suffice to cover the interest on a loan levied to carry out a proper and complete scheme of drainage. There must be some low-lying district where a sewage farm could be established or a point on the coast where the sewage outfall could be

brought without injury to bathing. Of course it will be difficult to urge the abolition of cesspools and to propose direct drainage into the sewers while these latter have their outfalls either among the shipping in the port or in the stagnant water of the canals.

In the old inner port, known as the Basin du Paradis, close to the ancient but now abandoned town railway station, there is a sewer outfall. When the tide runs out a filthy, greasy, black mud is exposed, which gives off foul odours. Here are a great number of fishing smacks. The owners of these vessels still continue to look with favour on the filth by which they are surrounded; it makes a soft bed for their boats to rest upon when there is no water in the port. The town authorities more than two years ago had offered to send in a dereger to remove these sewer deposits; the fishermen refused the offer, so that the dirt remains, much to the annoyance of all visitors to Calais.

The fishermen's quarter near the lighthouse, called the Courgain, remains in the same picturesque and insanitary condition as when I described it last. The houses are still devoid of any sort of sanitary convenience, and utensils containing night soil are brought out every morning into the streets and emptied into a large drain in the middle of a somewhat elegant kiosk. A scavenger flushes this place once a day, and all that has been emptied into it flows into the port among the shipping. On the other hand, this, the slum of Calais, is a marvellous picture of cleanliness. The fishwives, with their neat hand-knitted woollen stockings, thick, short, clean skirts, their wooden clogs, and caps of spotless white, are ever engaged scrubbing the floors of their little houses, washing down the walls, and sweeping the narrow street. On the whole, the quarter is healthy in spite of the total absence of drainage. The wonderful neatness, order, and cleanliness of the inhabitants compensate in a great measure for the smallness of the houses, the narrowness of the streets, and absence of closets or drains.

Now that the fortifications are finished, that the heaviest work and expenditure for the new port and docks are also completed, perhaps more thought will be devoted to sanitary improvements. The fact that in two years the sewers have been augmented in length from 6320 metres to 10,860 metres is evidence of good intentions. There is, I have shown, still much to be done, but what has been achieved during the last two years gives good promise for the future.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Health of the City.

UNDOUBTEDLY the late severe weather is responsible for a large increase in the number of pulmonary affections, so much so that the death-rate rose last week from 19·4 to 26·6. Only six deaths were certified as due to influenza, as compared with seven in the preceding week, facts which show that this dire disease is not as yet present in an epidemic form among us. At the same time there is a large amount of sickness generally, many practitioners being sorely overworked by the exceptional strain. For instance, the parish authorities report that the out-door medical relief has gone up 35 per cent. above the average. The Health Committee have printed and circulated a handbill among householders, detailing the symptoms, treatment, and means of prevention of influenza. The most important part of the advice given is, "Send for the doctor without delay," a common-sense view which commends itself to most intelligent minds.

Hospital Saturday Fund.

The first meeting of the Board of Delegates for the administration of the Birmingham Hospital Saturday Fund was held at the Council-house on the 25th inst. under the presidency of the Mayor (Councillor Lawley Parker). A sketch of the history of this movement for the past nineteen years was given, and it was pointed out that in 1891 a legal constitution became necessary for the purpose of carrying out the new plans, and that the association was registered on Dec. 29th as a company. The purchase of a property at Tyn-y-coed, near Llandudno, was effected for the sum of £7500, this amount being generously given by Miss Stokes, the object being to establish a convalescent home in connexion with the fund. It is intended that the sum of £10,000 per annum shall be given to the hospitals for the gratuitous work they do, and that the remainder of the money shall be devoted to the maintenance of the home. Some interesting figures were given by Mr. Smedley, the secretary, with whom the idea originated of making this departure, of such vast importance to the working classes of the city. He showed that the sum contributed by the working classes to the hospitals in 1867 was £500, in 1890 it was £19,000, and he believed that it would be still greater as years went on. Some very significant figures were also given with regard to the sources of the subscriptions. Thus between £19,000 to £20,000 came from working men, £12,000 from private subscriptions, £4000 from country subscriptions, and about £4000 from Hospital Saturday. The total income of the hospitals in 1890 was £55,373, of which £5667 came from legacies, donations, and investments. The incidence of this new departure will bear strongly on the provident principle, and will have an important effect on the present working of the hospital system.

Changes in Appointments.

Dr. Suckling has resigned the post of physician to the Workhouse Infirmary. The salary is £200 a year. Dr. G. F. Crooke, pathologist to the Queen's Hospital, is a candidate for the appointment. Mr. Augustus Clay has resigned the post of casualty surgeon to the Queen's Hospital. The promotion of Mr. Haslam to the honorary staff of the General Hospital has left a vacancy for an assistant surgeon. Among the candidates are the present house surgeon, Mr. Albert Lucas, Dr. Felix Vinrace, and Dr. B. F. Jordan. The appointment will be made on Feb. 5th.

The Children's Hospital.

The annual meeting of this charity was held at the Medical Institute on the 25th inst. Mr. H. Wiggin, M.P., presided. The thirty-first annual report was presented, and showed that the number of in-patients for the year was 841, out-patients 11,999, casualties 832, and home patients 22. The detention rate was 21·3 days, the death-rate 10·4 per cent., the cost of maintenance of patients 2*s.* 9*d.* per week, and of officers 8*s.* 3*d.* per week. The accounts showed that the income was £80 less than the expenditure. The magnificent gift of a convalescent home at Moseley by Mr. Cadbury will allow of twenty beds being always at the disposal of the hospital. The usual votes of thanks were passed.

Birmingham, Jan. 29th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Influenza.

THERE have been many cases of influenza in and around the city, and when it has been followed by pneumonia or other chest complications it has been very frequently fatal. In the majority of cases recovery follows, but the inconvenience arising from its prevalence is very great, especially among large bodies of men like the police and postal officials. The weather has been somewhat milder during the past week, which will probably have some effect in diminishing the more serious complications.

One Year's Result of the Infectious Diseases Notification Act.

At the last ordinary meeting of the Medical Institution Dr. E. W. Hope, the assistant medical officer of health, recounted the results of the working of the Notification of Infectious Diseases Act in Liverpool from its first adoption on Sept. 1st, 1890, to Sept. 1st, 1891. Liverpool was slow to adopt the Act, and local practitioners had grave misgivings as to its working, which, however, have been dispelled. Simultaneously with the adoption of the Act a small subcommittee of the Medical Institution was appointed to confer with the medical officer of health as to the most suitable form of certificate by which the notification could be made. This form was usefully designed to enable the certifying practitioner to supplement the notification with additional information, which supplemented form, when filled up, obviated much inconvenience and irritation. Arrangements have been made between the medical depart-

ment and the School Board by which every absence from school of a scholar alleged to be suffering from infectious disease is reported by the master or mistress to the medical department; while, in return, the latter sends information daily to the head master or mistress of any school attended by scholars coming from houses in which infectious disease is ascertained to exist, this being a double check against the spread of infection. This interchange of information has enabled measures to be taken with regard to several localised outbreaks of a somewhat serious nature; and in one case what threatened to be a formidable outbreak of typhus fever was promptly and effectively dealt with. Dr. Hope's paper contained additional valuable details, and it is satisfactory to note that the notification of these diseases here has been successful.

Dangers from attending Funerals.

Liverpool has always been in advance in the matter of funeral reform, and particularly in that phase of it which is now attracting so much attention. At the funeral of a well-known local surgeon, in 1879, which was largely attended by his professional brethren, the service at the graveside was considerably shortened. It happened to be Christmas Eve; the weather was intensely cold, and, in addition to this, the rain fell in heavy showers. The same practice has been followed since in not a few instances, and at the funeral of the late much-respected chaplain of St. James's Cemetery, the Rector of Liverpool, who officiated, warned all present, before leaving the chapel, to keep their heads covered at the grave. No sight can be more distressing than to see aged and bald-headed men standing bareheaded round a grave in such weather as has recently prevailed, and there seem good grounds for hoping that the senseless practice may become obsolete. Another well-known clergyman recently contracted a very severe illness from attending a funeral.

Liverpool, Jan. 27th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Proposed Albert University for London.

THE opposition to the proposed new university upon the lines laid down for its establishment is quite as strong here from the Victoria University authorities as in the metropolis from the London University, though it takes somewhat different lines in the two places. The Victoria University and its constituent colleges in Manchester, Liverpool, and Leeds in the memorial which they have issued base their objections chiefly on medical grounds. They endeavour to show "that the provisions of the Draft Charter of the Albert University will, if sanctioned by Parliament, seriously endanger the maintenance of the standard of medical degree examinations, which the Victoria University has sought to uphold, more especially with regard to preliminary general qualifications in arts and to preliminary special qualifications in science; and furthermore, that these provisions will seriously affect the prosperity of medical schools outside London, upon the establishment and development of which large sums liberally contributed by the public have been spent, by inducing students to betake themselves by preference to London, where a medical degree will be obtainable with less effort and on easier terms." In the matter of university extension lectures the Victoria University is doing a good work. This session there are nearly a hundred centres of instruction in this and the neighbouring county of Yorkshire, many of the courses being given by arrangement with the County Councils.

Owens College.

The College has got well into work again after the short Christmas vacation, the most important event having been the installation of the new Professor of Pathology, Dr. Delépine. As previously reported in these columns, the vacancy arose by the transfer of Dr. Dreschfeld to the chair of Medicine, rendered vacant by the resignation of Professor Morgan. The chair of Pathology in Owens College is now one of the best endowed in the kingdom, out of funds bequeathed by the late Daniel Proctor, after whom the professorship is named. Dr. Delépine comes to us from London, with a good record, and his inaugural address was listened to by a large audience. Very different now is the position of pathology in the curriculum of the student to that of a dozen years ago. When Dr. Dreschfeld first commenced work as lecturer on pathology the students attending his class could have been counted on the fingers; now it attracts all the best men, and the courses are as fully attended as those of any other subject.

The Disposal of Town Refuse.

A subject which has excited a considerable amount of interest in the city generally, and especially amongst those who take interest in municipal work, is the disposal of town refuse. The corporation proposed to erect "destructors" at various points to deal with this material, believing that the work can be accomplished without nuisance, but at each suggested site a great cry of opposition has arisen from the adjacent residents. Public meetings have been held, memorials largely signed by members of the medical profession and other methods of organised opposition have been put in operation, and at the last meeting of the City Council the subject was discussed at length without any conclusion being arrived at. There would appear to be some misapprehension abroad in the public mind, and it appears to be thought that the Corporation intend dealing with excrementitious matter at these destructors. If this be so, nuisance will inevitably arise; but if material other than this only is to be dealt with, then the operations can be conducted without danger of annoyance; at least, such is the report from other towns. A subject mixed up with this is the provision of water-closets in place of the system of pails which is so largely in use amongst cottage property here, and which is without doubt the source of much nuisance and insanitary conditions.

Pauper Dietaries.

It is notorious that the dietaries of the different workhouses of the country vary considerably both in quality and quantity. A conference of representatives of the chief Poor-law authorities of this district has just been held to consider the question, apparently at the instigation of the Local Government Board. Dr. Rhodes, of the Chorlton Board of Guardians, has taken considerable trouble in giving prominence to this subject, and he took a leading part in the proceedings of the meeting, which was presided over by another well-known medical man, Mr. Bowring. In the result it was recommended that the following should be a sort of standard dietary for the four Boards of Guardians represented:—Dinner: Sunday—Five ounces of meat (weighed uncooked), six ounces of suet pudding, eight ounces of potatoes. Tuesday and Thursday—Four ounces of cooked meat, twelve ounces of potatoes, four ounces of bread. Wednesday and Friday—Thirty ounces of pea-soup and six ounces of bread. Monday and Saturday—One pint of potato hash, three ounces of meat (weighed uncooked), twelve ounces of potatoes, half an ounce of onions, and four ounces of bread. Supper: Tuesday and Friday—One pint of gruel, five ounces of bread, two ounces of cheese. Other days—Six ounces of bread and a pint of cocoa. It was also suggested that a special low dietary might well be adopted for those able-bodied men who were nothing but a nuisance and would not try to work.

Juvenile Drunkenness.

A shocking case of drunkenness in a child was recently before the city magistrates. The mother of a little girl only three years old, together with another woman, were convicted of giving the child, in a public-house, whisky and port wine until it was helplessly intoxicated and had to be taken to the infirmary for medical treatment, so alarming was its condition. The mother was sent to prison for fourteen days and the other woman for a week; but what shall be said of those persons at the bar of the public-house who, it is stated, supplied the intoxicants?

The Royal Infirmary.

At the monthly meeting yesterday of the Infirmary Board a vote of condolence was passed, to be forwarded to Her Majesty the Queen and their Royal Highnesses the Prince and Princess of Wales, on the death of the Duke of Clarence and Avondale. Her Majesty is a patroness of the Infirmary, and it has special permission to use the prefix "Royal." It was stated that the Board now have various plans under consideration for the proposed extension; but it is not said when these plans will be open for inspection, or when the public meeting is to be summoned to give sanction to any such extension.

Influenza.

As stated in THE LANCET last week influenza, though present in the city and suburban districts, is of a comparatively mild character, is so far of no very widespread prevalence, and has shown a very different tendency to the outbreak of last year to rapid diffusion and spread. Although the evidence as to its infectious nature is apparently incontrovertible, there must be other factors at work, call them what we will, miasmatic, climatic, or meteorological, of which we are profoundly ignorant, else why this striking difference in its dissemination in different parts of the country and at different times?

Manchester, Jan. 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Influenza Epidemic.

THERE is some abatement in the severity of the attacks of influenza reported in the northern counties, but the number attacked has decidedly increased. There has been a very high death-rate at Carlisle, 45 per 1000, as against 21 per 1000 in the corresponding fortnight last year. At Naworth Castle, near Carlisle, about thirty of the inmates have been attacked; of this number, fourteen were seized simultaneously. At Middlesbrough the disease is rife, and several prominent corporation officials have been laid up, and in the neighbouring district of Eston the medical officer reported the highest death-rate since the local board was formed, including in] the fortnight nineteen deaths from influenza and its complications; but the medical officer (Dr. Malcomson) said he had reason to believe that the fatalities from other diseases than those above-named were due to a previous attack of influenza. Before I leave the subject I may say that our local newspapers are now very much taken up with influenza "cures" and "curers." It is a general opinion, however, of the profession here that these ready writers contribute nothing of the least value as regards the cause or cure of the disease.

Newcastle Clinical Society.

This young and vigorous society gave its annual banquet, at the Crown Hotel in this city, on Thursday last, which was presided over by Mr. Walter Ridley, and well attended. The whole arrangements were complete, and creditable to the honorary secretary, Dr. George Murray. The guests represented all departments of the profession in the district. I was glad to see our venerable citizen, Dr. Embleton, present.

A Handsome Vaccination Grant.

Dr. Whamond, medical officer to the South Shields Union for the district of Jarrow and Hebburn, has received a grant of £100 from the Local Government Board; this is the ninth grant given by the Board to Dr. Whamond for successful vaccination.

The Royal Infirmary and Students' Fees.

A subscriber to the Newcastle Royal Infirmary points out that, while the Royal Infirmary is asking for funds to make up an apparent deficit of £2000, there are some 200 students paying the treasurer about £10 per annum each, which, if placed properly in the accounts, would make the present income sufficient to balance the outlay, and he asks why these fees are not included in the balance sheet.

Curious Case of Aneurysmal Varix.

By the kindness of Mr Frederick Page I saw an interesting case of varix now under his care at the Royal Infirmary. The patient, a miner aged about forty, a month ago received an injury to the neck requiring ligatures of the jugular to stop the hæmorrhage. A tumour consequently formed, and it is now as large as a duck's egg, and pulsating; the pulsating current apparently arises from the external carotid. I have not heard yet if any operative procedure is contemplated.

Bequests of the late Mr. John Coppin, J.P.

The late Mr. John Coppin, J.P., of Bingfield Hall, Northumberland, has, among other bequests, given the following:—To the Newcastle Convalescent Society, £500; the Natural History Society of Newcastle, for a curator, £2000; and to the National Hospital for Consumption, Ventnor, £500.

One of our Newcastle papers regrets to hear that Dr. Heath is lying seriously ill at his country residence, near Durham.

Newcastle-on-Tyne, Jan. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Association for the Reform of Medical Education.

ONE of the points which this Association made in its statement to the Universities Commission bore upon the extraordinary prominence given to the subject of materia medica in the Draft Ordinance issued by the Commission. Other bodies, as well as this Association, have commented upon this. A counterblast to the Association's statement has now been prepared, insisting on the necessity of two examinations on this subject, one in pharmacy and pharmacognosy, the other in pharmacology and therapeutics.

Diseased Meat Case in Edinburgh.

At the end of last week, in the Edinburgh Police-court, an exceedingly bad case of selling diseased meat was before the sheriff. A butcher in town, the head of an old and prosperous business, is also a farmer, and it appears that towards the end of December last one of his bullocks died suddenly. The manager of the farm believed the animal died of splenic fever, and told his master so. The carcase was nevertheless ordered to be sent into town, and was disposed of in the owner's shop. The dead animal had been skinned by a shepherd who had a slight wound on his arm, through which he was inoculated, and as a result died. The examination of the viscera showed the case to be one of anthrax. The butcher pleaded guilty, and was fined £20. So far, no further harm has been found to be associated with this case; but the possibilities of danger seem almost infinite when the virulence of the poison is borne in mind and the numerous hands, baskets, and dishes which must have been in contact with the various cuts, and the numerous mouths and stomachs into which bits of that carcase must have been introduced, are calculated. The possibility of such meat getting into the market shows the utter inadequacy of present laws and arrangements.

The Health of Edinburgh and Leith.

The mortality last week was 102, making the death-rate 20 per 1000. Diseases of the chest accounted for 50 deaths, and zymotic diseases for 5. The intimations for the week were: typhus fever 1, typhoid fever 4, diphtheria 3, scarlatina 17, and measles 20. The deaths in Leith last week numbered 35, making the death-rate 26 per 1000.

The Edinburgh Medico-Chirurgical Society.

At the meeting of this Society last week two cases of empyema in adults cured by drainage were shown, and Professor Struthers showed an interesting example of "rider's bone," the condition being an ossification of the tendon of the adductor longus on both sides. Dr. J. W. Ballantyne made a careful communication on an investigation into the Spinal Column in the Infant, and Dr. Sloan recorded the features of an extreme case of Hystero-catalepsy followed by insanity and recovery. A number of members offered remarks on both papers.

Edinburgh, Jan. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Typhoid Fever in Dublin.

A CONFERENCE was held in Dublin last week on the subject of the prevalence of typhoid fever, and after the matter had been fully discussed the following resolution was adopted: "That this meeting appoint a committee empowered to draft a memorandum dealing with any facts within the cognisance of such committee bearing on the prevalence of typhoid fever in Dublin, for the consideration

of the Public Health Committee, with a view to induce the Public Health Committee to make a special investigation into the causes of typhoid fever." The following were appointed to act on a subcommittee of the Dublin Sanitary Association in preparing the memorandum referred to, their draft to be submitted to a future meeting of the conference—viz., Drs. Emerson Reynolds, C. Nixon, and Messrs. Drew and Maunsell.

Trinity College Tercentenary.

Next year being the tercentenary of the University of Dublin, rumours were industriously circulated by interested parties that it was the intention of the board to relax the College rules respecting term and degree examinations on the occasion of the tercentenary celebration. The Provost and Senior Fellows, however, have intimated that they do not intend this year to allow terms or grant degrees without examination, being of opinion that such action on their part would tend to lower the estimation in which the education given in Trinity College is held by the public.

National Eye and Ear Infirmary, Dublin.

During the past year, except for a few weeks in spring, the hospital has been overcrowded, and there have frequently been more patients in the institution than beds. The committee have appealed for funds to increase the size of the hospital, but the response, so far, has fallen short of the amount (£7000) required. During the year the oft-debated question of the amalgamation of the hospital with St. Mark's has been again under the joint consideration of the committee and of the board of St. Mark's Hospital, but nothing definite has yet been decided.

Galway County Infirmary.

This institution is again closed owing to a want of agreement between the governors of the infirmary and the authorities of the Queen's College. In the meantime the matter is serious for the college students, who may lose an academical year if some arrangement is not at once carried out. A memorial has been sent on behalf of the medical students to the Council of the Queen's College, but the result has not yet been made known.

Death of a Dublin Centenarian.

Mrs. Mary McDonald died in Ormond Market last week aged 102 years. Deceased was born in the Market in 1790, and during her entire life never slept outside the precincts.

Cork Union.

Mr. Runciman has been appointed medical officer of one of the Cork dispensary districts, vacant by the death of Dr. Harvey. There were seven candidates. Mr. Runciman has resigned the appointment of house surgeon to the Cork South Infirmary, and has been succeeded by Mr. Jackson.

Hospital for Consumption and Diseases of the Chest, Belfast.

The annual meeting of this charity was held on Jan. 21st. From the medical report I learn that there were 1101 new extern and 53 intern patients during the past year. There is a balance in hand of £68 2*s.* 4*d.* for the current account. Under the head of building fund the committee have £4227 11*s.* 1*d.*, which includes the donation of £2700 given by Mr. Forster Green for the ground for the new hospital at Newtownbreda. Captain McCalmont, M.P., who presided, in acknowledging a vote of thanks, said it seemed to him a matter requiring explanation that a sum of about £16,000 was voted by Parliament for the support of hospitals in Dublin. He had no wish to deprive the Dublin hospitals of their grant, but he thought that a city like Belfast, which contributed so much larger an amount to the revenue, and which contained a larger working population, had a fair claim to a similar grant, and he would promise to do his best, when Parliament met, to obtain a satisfactory explanation of the present arrangement.

The Ulster Medical Society.

At the third meeting of this Society for the present session communications were brought before the members by Dr. Cecil Shaw on the Treatment of Phthisis by Intralaryngeal Injections, by Dr. J. A. Lindsay, who gave a summary of fifty cases of Chronic Valvular Disease of the Heart, with special reference to Prognosis and Treatment, and by Dr. W. M. Killen, who read short notes of the Treatment of Puerperal Septicæmia as practised by him in a recent case. Dr. Killen also described the Treatment of Ophthalmia Neonatorum as practised at the Ulster Eye, Ear, and Throat Hospital.

Outbreak of Typhus Fever in Armagh.

At a meeting of the board of guardians, held on Jan. 26th, it was reported that in the fever hospital of the workhouse there are two cases of typhus fever, and that three other cases would be admitted. In a letter to the board their medical officer, Mr. Robert T. Herron, pointed out the fact that the patients had come from most insanitary dwellings; indeed, he said the place from which a woman with the disease was removed would not make a respectable pig-sty. The disease has not visited Armagh since 1864, and by vigorously pointing out how it can be prevented, Mr. Herron is doing good service in the cause of preventive medicine.

Death of Dr. John King Maconchy.

I have heard of the death from influenza of Mr. Maconchy, M.B., F.R.C.S.I., which occurred at his residence, Downpatrick, on Jan. 25th. He was surgeon to the Down Infirmary, the County Down Lunatic Asylum, and the prison. Dr. Maconchy for many years was the leading medical practitioner in the southern part of the county Down. He was an able surgeon and a man of all-round ability, and had developed a large private and consulting practice.

Jan. 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Antipyrin in Erysipelas.

IN the course of an epidemic of idiopathic facial erysipelas which visited the barracks at Syra, Dr. Fonstanos, medical officer to the hospital, was led to employ antipyrin in the treatment of cases of this disease, some of which were complicated by pneumonia. The results obtained by the method were so satisfactory and marked that he goes the length of speaking of the drug as a specific in this affection. Its action in lowering temperature was in these cases of erysipelas well brought out, and through this and the abundant perspiration which accompanied it a notable staying of the inflammatory process was very evident, due perhaps to the vigorous elimination by the skin of the streptococcus in great quantity. In every case during the epidemic in which recourse was had to the drug it did well, while complications were frequent in those in which other methods were employed. The dose, varying according to age and gravity of symptoms, was from twenty to sixty grains a day, divided in powders and taken at frequent intervals.

Hiccough and Compression of the Phrenic.

A novel method of combating persistent hiccough was recorded by M. Leloir at a recent meeting of the Academy of Sciences. Some years back he was consulted by the parents of a little patient who was the subject for over a year before of a persistent and distressing hiccough, which recurred every half minute or so, and which had resisted every plan of treatment. M. Leloir then conceived the notion of compressing the phrenic, which he did between the sterno-clavicular attachments of the sterno-mastoid muscle. The compression was digital, and continued for three minutes, causing, however, considerable pain. As a result, the hiccough disappeared entirely, and has not recurred. Since then he has adopted the plan in several other cases of the kind, and always with complete success. The method is simple enough, and can be put in practice by anyone, and is, besides its utility, interesting as an example of the successful application of the researches of Brown-Séquard on inhibition.

Tuberculosis and the Common Earthworm.

It will be recollected that in 1880 Pasteur showed that the common earthworm could become the receptacle or habitat of the bacterium of charbon which was traceable to the cadavera of animals dead of this disease and buried in soil in the neighbourhood of which the worm lived. The possible relations between micro-organisms and these lumbricoids being thus established, MM. Lortet and Despeignes undertook some experiments with a view of elucidating a very probable connexion between these same lumbricoids and the bacillus of tubercle

In the result these observers have satisfied themselves that these animals—so universal and active—can become the hosts for several months of the tubercle bacillus, which loses none of its virulent properties by its change of abode. It is obvious that under certain circumstances the earthworm might readily become a too efficient medium for the propagation of this scourge of mankind. The experiments of MM. Lortet and Despeignes have a further interest in being the first instance, I believe, on record in which the "tuberculisation" of an animal belonging to the wide class of invertebrates has been demonstrated.

Medical Reform.

It has long been felt that the vast clinical fields of the Paris hospitals were hardly being made the best use of, and that much good work might be done by organising a curriculum of instruction over and above that of the Faculty of Medicine, and which might be carried out by the numerous and capable hospital physicians and surgeons who have no direct connexion with the School of Medicine, but who receive their appointments from the Assistance Publique which administers the hospitals, and which is itself a part of the Municipal Government of Paris. With this object a proposition is now before the Municipal Council which, if adopted, will organise a new field of clinical instruction complete in itself and entirely independent of the Faculty—corresponding, in fact, somewhat to the extra-mural schools in Scotland.

Paris, Jan. 27th.

Obituary.

SIR OSCAR CLAYTON.

SIR OSCAR M. P. CLAYTON, C.B., C.M.G., died on the 27th inst., at his residence in Harley-street, from exhaustion following upon prolonged attacks of gout, in a system debilitated by the severe illness from which he suffered twelve months ago. He was the eldest son of Mr. James Clayton, of Percy-street, Bedford-square, and was born in 1816. Educated at Bruce Castle, Tottenham, he entered at University College, and afterwards at Middlesex Hospital. He became a Member of the Royal College of Surgeons in 1838, and was elected a Fellow in 1853. He was extra surgeon to the Prince of Wales and surgeon in ordinary to the Duke of Edinburgh. He was also a Knight of the Order of Leopold of Belgium, and occupied the post of deputy-lieutenant for Middlesex and the Tower Hamlets. Sir Oscar Clayton contributed very little to the literature of medicine or surgery, but his skill and success in the treatment of patients coming under his care were generally acknowledged.

JOHN McDONNELL, M.D., F.R.C.S.I.

DR. MCDONNELL died on the 20th inst. at his residence, Upper Fitzwilliam-street, Dublin, at the great age of ninety-six years. Deceased was born in Belfast, and entered Trinity College, where he graduated in arts in 1818. A few years previously he was apprenticed to Mr. Richard Carmichael, the eminent surgeon, and in 1821 obtained the licence in surgery of the Royal College of Surgeons in Ireland. He studied in Edinburgh, London, and Paris, and obtained his degree of Doctor of Medicine in the University of Edinburgh in 1825. He settled in practice in Dublin in 1826, or thirteen years after he had commenced his professional studies. He was a lecturer on anatomy and physiology in the Richmond School of Medicine and surgeon to the Richmond Hospital. These two appointments he obtained by the influence of Mr. Richard Carmichael, who left him a sum of £5000 in his will. In 1847 he was appointed Professor of Anatomy to the Royal College of Surgeons, which post he resigned four years afterwards on being appointed medical member of the Poor-law Commission and afterwards medical member of the Local Government Board for Ireland. Dr. McDonnell was the author of the article on fractures in the "Cyclopædia of Practical Surgery"; and it is believed that he was the first in Ireland to use ether as an anæsthetic. The late Dr. Robert McDonnell, F.R.S., an eminent Dublin surgeon, was a son of the subject of this notice. The funeral took place on Saturday last, the remains being interred in the family burying-ground, near Drogheda.

MEDICAL TRIALS.

STEELE AND OTHERS *v.* SAVORY AND OTHERS.

THIS case was heard by Mr. Justice Romer on Tuesday and Wednesday last, when Mr. Moulton, Q.C., Mr. Costelloe, and Mr. Barnard Lailey appeared for the plaintiffs; the Attorney-General, Q.C., M.P., Mr. Haldane, Q.C., M.P., and Mr. J. R. Paget for the defendants.

Mr. Moulton, Q.C., in opening the plaintiffs' case, explained the circumstances out of which the action had arisen, referring particularly to the controversy which has for so long a time been in progress concerning the rights of Members of the College to take part in the election of the Council and the general administration of the affairs of the College. He commenced his narrative by a reference to the general meeting which was convened on March 24th, 1884, for the purpose of considering the proposals then made for a Supplemental Charter, and the resolutions then passed to the effect that it was not desirable to change the constitution of the College without the consent of the majority of the Members, and that it was inexpedient to prosecute an application for a Charter upon the lines of the draft then submitted.

Having thus noticed the origin of the dispute, he passed to the By-law No. xvii., which was called in question in the action, and read it in the following terms: "No business whatever shall be transacted nor any matter be discussed or debated, at any meeting or assemblage convened by or under the authority of the President or Council, or before or after the business thereof shall have commenced, other than the particular business or matter in respect of which such meeting or assemblage shall have been convened; nor shall any debate or discussion whatsoever be had or allowed at any meeting convened by the President or Council for the delivery of lectures or orations, either before or after the same shall have commenced or terminated. And no meeting or assemblage of Fellows or Members of the College shall be held in the Hall or Council-house of the College, or in any of its appurtenances, unless convened by or under the authority of the President or Council; and no Fellow or Member of the College shall advertise or convene or attend, or combine with others to advertise or convene or attend, any meeting or assemblage in the Hall or Council-house of the College or in any of its appurtenances not authorised by the President or Council. And any Fellow or Member of the College who may in any manner offend herein shall be liable to be restrained and excluded by the Council from attending any orations and lectures at the theatre, and from any use of or admission to the library and museum, and to be suspended from any or all other privileges which he may have as a Fellow and Member or a Member of the College for any such period as the Council may adjudge, or to removal by resolution of the Council from being a Fellow and Member or a Member of the College; and every Fellow or Member of the College who shall be removed as aforesaid shall thereupon forfeit all his rights and privileges as a Fellow and Member or a Member thereof."

He then read extracts from the correspondence which had passed between the plaintiffs and the secretary of the College to show that the Council proposed to put the by-law in force against the plaintiffs, and submitted that it was bad in law, and that the Council should be restrained by injunction from putting it in execution. The objections which he alleged to the by-law were two—(*a*) that it denied to Members of the College their rights, and (*b*) that it inflicted the unwarranted and unreasonable penalty of expulsion by the Council as the consequence of disobedience to the by-law. Upon this footing he claimed a threefold relief—(1) a declaration that the by-law was bad; (2) a declaration as to the Members' rights of meeting; and (3) an injunction to restrain the Council from acting on the by-law or in any way putting it in force. Under the second head of relief he asked more particularly for a declaration that reasonable use of the Hall of the College for

proper corporate purposes could not be taken away from the Members by a by-law, and in support of his case he submitted as principles of corporation law that the jurisdiction of the Council extended only to regulating the affairs of the corporation so as to produce the maximum advantage, and that the power of disfranchisement was inherent in the corporation as a whole, and could not be exercised by any select body unless committed thereto by the instrument which created the corporation and determined its constitution. He then glanced at what he suggested would probably be the ground upon which the defence would be rested—namely, a clause in a Charter granted to the College in 1843, which conferred upon the Council the power of making by-laws, and of enforcing them by expulsion, in the following terms: "That if it shall at any time hereinafter appear that any present or future Member, or any Fellow of the said College, to be appointed or admitted at any time after the expiration of the said first three calendar months from the date hereof, shall have obtained his letters testimonial or his diploma respectively by any fraud, false statement, or imposition, or that either before or after obtaining such his letters testimonial or diploma he shall have violated any by-law, rule, or regulation of the said College, then and in every such case, and after such previous notice to and such hearing of such Member or Fellow as under the circumstances the Council of the said College shall think proper, it shall be lawful for such Council to recall and to declare the letters testimonial or diploma respectively of such Member or Fellow to be void, and thereupon every such Member or Fellow shall cease to be a Member or a Member and Fellow of the said College, as the case may be, accordingly."

Commenting upon this clause, he suggested that the true construction would be not that the Council should have an unrestricted power to make by-laws and to enforce their observance upon members by the penalty of expulsion, but only such a power as would be consistent with the enjoyment by the members of all the rights which appertained to members of the old Company of Surgeons' rights, which, having been conferred by Act of Parliament, could not be taken away by Charter. Thereupon the Attorney-General objected that Members of the College of Surgeons could not claim the rights possessed by members of the old companies and guilds of surgeons which existed before 1800, because the old Company of Surgeons ceased to exist then. Upon this Mr. Moulton argued that the old Company had not in law been dissolved at that time, and that by the Charter of 1800 members of the present College of Surgeons were one body continuously with the members of the old companies. He further pointed out that under the Charter of 1800 there was no power of expulsion given to the Council.

Without calling on counsel for the defendants, Mr. Justice Romer gave judgment, dismissing the action with costs against the plaintiffs. He held that the corporation established by the Charter of 1800 was a new corporation, and that the only rights which the plaintiffs could claim were under that Charter; that the By-law xvii. was not *ultra vires;* and that power to make it was expressly given to the Council by the Charter of 1843.

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary quarterly comitia of the College was held on the 28th inst., Sir Andrew Clark, Bart., President, in the chair.

Drs. Barratt, Bird, Fenn, and Kanthack were admitted to the Membership.

The College seal was affixed to the lists of those gentlemen who had recently passed the examinations for the Licence of the College and the examination in Public Health (conjointly with the Royal College of Surgeons).

A communication was read from the Secretary of State for War respecting the method now in vogue of conducting examinations for admission to the Army Medical Staff; and a committee was nominated to confer with a similar committee already appointed by the Council of the College of Surgeons upon the question. The committee consisted of Sir Joseph Fayrer, Dr. Cheadle, Sir Dyce Duckworth, Dr. Green, Dr. Farquharson, M.P., and Dr. N. Moore.

A letter was read from the Metropolitan Asylums Board asking for an authoritative opinion respecting the infectiousness of influenza, and the possible risks entailed by the conveyance of influenza patients in public vehicles. The President explained that he had counselled the chairman of the Board to sanction the use of the ambulances belonging to the Board.

At the request of the Executive Committee of the National Leprosy Fund, Sir Dyce Duckworth and Dr. Heron were reappointed to serve on the Special Committee to draw up a memorandum on the work of the Indian Commission and organise further inquiries upon the subject.

The vacancies on the Council caused by the death of Sir R. Bennett, and the retirement by rotation of Drs. J. Harley, Morgan, and Cheadle, were filled by the election of Drs. Maudsley, Bastian, Cayley, and Douglas Powell.

In compliance with a proposal from the Society of Arts, the Treasurer, Registrar, and Senior Censor were nominated a committee (with power to add to their number) to confer with that Society on the subject of obtaining a new scheme for awarding the Swiney prize. At present this prize is awarded quinquennially by the Society of Arts and the College of Physicians alternately to the author of the best work on jurisprudence.

The alterations in the by-laws proposed at the last meeting were enacted for the second time.

The President nominated a large and influential Committee for the Revision of the Nomenclature of Diseases.

The Annual Report of the Examiners for the Licence and a Report from the Laboratories Committee were received.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the respective subjects:—

Surgery.—W. H. Andrews, King's College; W. H. Cooke, St. George's Hospital; S. D. Gill, Queen's College, Birmingham; A. A. Macfarlane, J. N. Martin, and C. S. Palmer, St. Bartholomew's Hospital; W. Robinson, Middlesex Hospital; J. H. F. Way, St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—J. D. Hessay, Middlesex Hospital; R. L. Romer and H. G. White, St. George's Hospital.

Medicine and Forensic Medicine.—S. A. E. Griffiths, Middlesex Hospital.

Medicine and Midwifery.—B. S. Foulds, Charing-cross Hospital; J. P. Jones and H. W. West, London Hospital; C. Webb, St. George's Hospital.

Medicine.—C. R. Harper, Middlesex Hospital; A. G. Haydon, St. Bartholomew's Hospital; W. H. Waddington, Owens College, Manchester.

Forensic Medicine.—E. H. Bingley, St. Mary's Hospital; F. B. Lewis, London Hospital.

Midwifery.—W. C. Howle, Queen's College, Birmingham.

To Messrs. Bingley, Cooke, Griffiths, Harper, Haydon, Howle, Robinson, and White was granted the diploma of the Society, entitling them to practise Medicine, Surgery, and Midwifery, and enabling the holder to compete for medical appointments in the Army, Navy, and India Services, and for Poor-law appointments.

LAHORE MEDICAL COLLEGE.—PRINCE ALBERT VICTOR MEMORIAL HOSPITAL.—The formal opening of this wing of the Mayo Hospital was performed by his honour the Lieutenant Governor on the 1st inst. in the presence of a distinguished company. This memorial hospital is erected to commemorate the visit which his Royal Highness paid to Lahore in January, 1890. Such an addition to the Mayo Hospital was urgently required. The total outlay, including the furniture and general equipment of the buildings, is estimated to amount to 108,580 rupees. The accommodation provided consists of three separate buildings—a main block, a second block, and a third block.

LIVERPOOL INFIRMARY FOR CHILDREN.—The work of this institution has been satisfactorily carried on during the past year. There has been a decrease in the number of in-patients, but the beds have been as fully occupied as in the previous year. The falling off in the number of out-patients is rather a matter of satisfaction to the committee. They feel the resources of the infirmary have been, in this department, overtaxed. The balance-sheet shows a deficiency, including the deficit brought forward from last year, of £351 9*s.* 2*d.* The Convalescent Fund has been again of great advantage in supplementing the work of the infirmary. During the year sixty-seven patients were sent to West Derby.

THE ALVARENGA PRIZE.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about 180 dollars, will be made on July 14th, 1892. Essays intended for competition may be upon any subject in medicine, and must be received by the Secretary of the College on or before May 1st, 1892. It is a condition of competition that the successful essay, or a copy of it, shall remain in possession of the College.

AN AMERICAN HOSPITAL DESTROYED BY FIRE.—On the 21st inst., an appalling and destructive fire broke out soon after midnight at the National Surgical Institute, Indianapolis, a well and widely known establishment in America. The conflagration broke out in the offices, immediately over which were the wards for infants and mothers. The wildest confusion ensued. When the police and firemen arrived the buildings were burning fiercely. No attempt was made to save anything but the lives of the inmates. Accommodation was quickly found for the rescued patients in a neighbouring building, where cots were put up for them. Nineteen bodies had been recovered from the ruins.

ROYAL METEOROLOGICAL SOCIETY.—The annual general meeting of this society was held on Wednesday evening, the 27th inst., at the Institution of Civil Engineers, Great George-street, S.W., Dr. W. Marcet, F.R.S., vice-president, in the chair. The report of the council for the past year showed the society to be in a very satisfactory position. In May the library and offices were removed to more commodious premises at 22, Great George-street. Thirty-four new fellows were elected during the year, the total number on the roll of the Society now being 552. Owing to the absence of the president, Mr. Baldwin Latham, M. Inst. C.E., through an attack of influenza, his address on "Evaporation and Condensation" was read by the secretary.

BEQUESTS AND DONATIONS.—Mr. Denis Daly has left £100 to St. Joseph's Hospital for Children, and £300 each to Jervis-street, Mater Misericordiæ, and St. Vincent's Hospitals, Dublin.—Lord Ardilaun has given £100 to the Meath Hospital, Dublin.—The late Mr. John Hampson Jones of Lowndes-square bequeathed £1000 to the Manchester Royal Infirmary, and £500 each to the St. Mary's Hospital, Manchester, Salford and Pendleton Hospital, Brompton Hospital for Diseases of the Chest, Fulham Hospital for Cancer, Great Ormond-street Hospital for Sick Children, Convalescent Home, Orme-square, Fairford Cottage Hospital, and St. George's Hospital.—The workmen of Sir W. G. Armstrong, Mitchell, and Co., at Elswick, have contributed, *inter alia*, for the quarter ending Dec. 31st last, £269 8*s.* 11*d.* to the Royal Infirmary.—The workpeople of Messrs. J. S. Fry and Sons, Bristol, have contributed, during the past year, £456 19*s.* 6*d.* to the local medical charities, of which was apportioned £105 to the Royal Infirmary, and a like sum to the General Hospital, Bristol.

THE ADULTERATION OF MILK.—The appeal case of Brown v. Foot was heard before Mr. Justice Hawkins and Mr. Justice Wills on Tuesday last in the Queen's Bench Division. The appellant had been summoned under the Sale of Food and Drugs Act for selling milk adulterated with 15 per cent. of added water, and the question raised was whether the actual seller of the milk was the person amenable to the penalties imposed by the Act, or the master, who was said to be unaware of the adulteration by the servant. Reference was made to this curious point in a leading article in THE LANCET of Nov. 28th, 1891, p. 1230. Mr. Justice Hawkins said the question was whether or not a principal in a milk business was liable for adulterated milk sold by a man in his employ. The magistrate had held that the master was responsible and had convicted him, and he was of opinion that the conviction was right. He thought that a master, for all purposes, must be deemed "a seller" of the milk, as well as the man who was in charge of the cans, and it was not at all necessary to prove that he was cognisant of the adulteration to make him guilty of the offence of selling adulterated milk. The absence of cognisance might be a fact to take into consideration in imposing the penalty, and the case would go back to Mr. Bushby, so that he might reduce the fine if he thought fit; but it must be clearly understood that the Court, in sending the case back, did not in any way direct the magistrate to do anything. They simply affirmed the conviction and dismissed the appeal with costs.

THE guardians of the Salford Union Infirmary, Hope, near Eccles, have appointed a night superintendent.

APOTHECARIES' HALL OF IRELAND.—Mr. A. Jackson of Bandon has been admitted a licentiate of the Apothecaries' Hall.

SOCIETY OF ANTIQUARIES.—Surgeon-Captain G. Harley Thomas, F.R.C.S.E., has been elected a Fellow of the Society.

THE GRESHAM LECTURES.—The lectures on Physic will be delivered at Basinghall-street on Feb. 2nd, 3rd, 4th, and 5th, 1892, by E. Symes Thompson, M.D., F.R.C.P. The subject will be "The Nerves."

ST. BARTHOLOMEW'S HOSPITAL.—The re-drainage of this hospital is, we understand, being rapidly proceeded with, special care being taken to ensure the best results. Hassall's patent safety jointed pipes are being used throughout the entire work.

ACCOMMODATION FOR LEPERS AT POONA.—Mr. Keyser, C.S., Collector, of Poona, on Dec. 30th, 1891, laid the foundation stones of two new leper wards in connexion with the David Sassoon Infirm Asylum, towards the cost of the erection of which the widow of the late Mr. Nusserwanjee Maneckjee Petit has given Rs. 8000.

FRENCH MEDICAL CHARITIES.—A commission appointed by the French Minister of Agriculture has arranged to devote the following sums to the objects named:—100,000 francs to the French Hospital, Constantinople, 75,000 francs for the establishment of a hospital in Savoy, and subventions for a second urban ambulance station in Paris, and for a hospital for scrofulous children at Raphaël, similar to the one at Berck-sur-Mer.

BOMBAY MEDICAL UNION.—The eighth annual gathering of the Bombay Medical Union was celebrated at the Ripon Club on Tuesday, the 22nd ult. There were present about sixty members of the profession. Dr. Temuljee Bhikajee Nariman presided, and in the course of his speech, in proposing the toast of "The Medical Profession," gave a *résumé* of the work done in the year in connexion with the Union and in the medical world generally. Other speakers followed.

FOOTBALL CASUALTIES.—During a match last week between the Loughborough Wednesday and Willoughby Clubs a player fractured his clavicle.—In the same week, a similar accident occurred to a player at Pennygillaw, in a game between the Launceston Brigade second eleven and the Launceston Town second eleven. On Saturday, in a match at Totnes, between the home team and Torquay Athletics, the captain of the latter team fell; several other players fell upon him, and medical assistance being obtained, he was found to be suffering from concussion of the brain.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of the Society was held on Wednesday, Jan. 13th. The chair was taken by Mr. Henry Lee, vice-president, in the unavoidable absence of the president, Sir James Paget. Two new members were elected, and the deaths of four reported. Grants to the amount of £1436 were made, to be distributed among the sixty-four widows and eighteen orphans receiving assistance from the Society. A fresh application for a grant was read from a widow, and assistance was given. The death of a widow in receipt of grants since 1879 was reported. The expenses of the quarter were £78.

THE CITY DISPENSARY.—The 103rd annual general meeting of the subscribers to this charity was held on Monday, at the dispensary, Watling-street, Mr. F. P. Alliston, C.C., Chairman of the Committee, presiding. The efficiency of the institution, the report stated, had been fully maintained. Consequent on the confiscation of the funds belonging to the parishes of the City, the dispensary had lost during the year a sum of about £150. In the course of the twelvemonth 12,606 patients had been treated, being, in comparison with the record of the previous year, an advance of 741. The accounts showed that, inclusive of a balance of £221 in the hands of the treasurer at the commencement of the year, the total receipts for the year were £1491, while the expenditure was £1308, a balance of £183 being thus left in the hands of the treasurer.

ROYAL DUBLIN SOCIETY.—The following have been elected members of this Society:—Daniel Corbett, jun., F.R.C.S., R. J. Montgomery, M.B., and Thomas J. Stafford, L.R.C.S.

NEWSVENDORS' BENEVOLENT AND PROVIDENT INSTITUTION.—The annual meeting will be held at the Memorial Hall, Farringdon-street, on Tuesday, Feb. 2nd, 1892, at 7.30 P.M., Alfred H. Hance, Esq., in the chair.

ROYAL UNITED HOSPITAL, BATH.—The annual meeting of the members of this institution was held on the 25th inst. The accounts in the report showed that the expenditure (including an adverse balance of £539 10*s.* 9*d.* from last year) amounted to £7307 10*s.* 6*d.*, the year closing with an increased deficit of £1179 11*s.* 10*d.* This state of things the committee accounted for by necessary wards at the hospital, extraordinary expenses on the building, &c., which will not recur for some years. There had also been a diminution in the receipts. The collections from places of worship have fallen off £155, donations are £328 less, while the amount of legacies available for current expenses has been £1099 14*s.*, as against £1631 18*s.*, a loss of £532 4*s.*

BIRKENHEAD BOROUGH HOSPITAL.—The annual meeting of the subscribers to this institution was held this week in the Town Hall, Hamilton-square, Birkenhead, the Mayor (Alderman Willmer) in the chair. The report of the committee recorded that, while the year had been one of great expense, the income from ordinary sources had fallen short by £260, so that the balance due to the treasurer had been increased from £26 to £528. There was a gratifying increase in the workmen's subscriptions of £60. A donation of £1000 was made to the hospital by Mrs. Stevenson in memory of her husband, the late Dr. Stevenson, who had given his services to the hospital for the long period of forty-three years, and this sum, together with the balance received under the legacy of Mrs. Tait, amounting to £529, would be invested on behalf of the hospital.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—The following were elected office-bearers for 1892:—President: Dr. David Lloyd Roberts. Vice-Presidents: Drs. W. MacFie Campbell, James Armstrong, John B. Hellier, James H. Keeling, Stephen Nesfield, and John Scott; Messrs. Charles J. Wright and Arthur Jackson. Honorary Treasurer: Dr. William Walter. Council: Drs. James Braithwaite, William Alexander, J. Gordan Black, Samuel Buckley, Archibald Donald, John E. Garner, Thomas A. Helme, Thomas Johnstone, James Lambert, John M. H. Martin, John W. Martin, J. Frank Nicholson, George J. Robertson, T. Starkey Smith, and John Wallace; Messrs. John E Burton, J. Nelson Cregeen, Thomas Fawsitt, John F. Horne, Arthur H. Laver, W. Mitchell Roocroft, A. W. Mayo Robson, James Taylor, and Alfred T. Townley. Honorary Secretary: Mr. Henry Briggs.

MAYO HOSPITAL, LAHORE.—The Prince Albert Victor Wing of this hospital was opened on Friday, the 1st inst., by the Lieutenant-Governor. The building has been erected at a total cost of Rs. 108,805, and the accommodation which has been provided consists of three separate buildings. One, the main block, is a structure by itself with two general wards on the ground floor, each for ten patients, and on the upper floor private rooms adapted either for Europeans or native. The second block is intended solely for the treatment of cases of contagious and infectious disease, and will accommodate eight patients; and the third block is occupied as quarters for the nursing staff. His Honour, in opening the building, spoke in gratified terms of the high state of efficiency of the college, and made allusion to the appropriateness of the opening of the wing, which was designed to mark the loyalty of the province, taking place on Proclamation-day.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London, and FANNIN & Co., Dublin.
Text-book of the Eruptive and Continued Fevers. By John W Moore, B.A., M.D., M.Ch. Dubl. 1892. pp. 535.

CHURCHILL, J. & A., New Burlington-street, London.
Lectures on Pathology; by the late Henry G. Sutton, M.B., F.R.C.P. Edited by M. E. Paul, M.D., and revised by S. Wilks, M.D., LL.D., F.R.S. 1891. pp. 503.

HIRSCHWALD, AUGUST, Berlin.
Anleitung zur Aseptischen Wundbehandlung. Von Dr. C. Schimmelbusch. 1892. pp. 199.

LEWIS, H. K., Gower-street, London, W.C.
The Treatment of Typhoid Fever. By Jas. Barr, M.D., with Introduction by W. T. Gairdner, M.D., LL.D. 1892. pp. 212.
The Pathology of Mediastinal Tumours, with special reference to Diagnosis. By J. L. Steven, M.D. 1892. pp. 98.
On the Medical and Surgical Uses of Electricity. By G. M. Beard, A.M., M.D., and A. D. Rockwell, A.M., M.D. Eighth Edition. Illustrated. 1891. pp. 788.
Massage and the Original Swedish Movements. By K. W. Ostrom. Second Edition. Illustrated. 1892. pp. 143. Price 3*s.* 6*d.* net.
A Treatise on the Diseases of Infancy and Childhood. By J. L. Smith, M.D. Seventh Edition. Illustrated. 1890. pp. 900.

LONGMANS, GREEN, & Co., London.
Chemical Calculations; with Explanatory Notes, Problems, and Answers. By R. L. Whiteley, F.I.C. With a Preface by Prof. F. Clowes, D.Sc. Lond., F.I.C. 1892. pp. 100. Price 2*s.*

Cow's Milk in relation to Human Health and Disease; by H. E. Armstrong (Daily Journal Office, Newcastle-upon-Tyne, 1892).—The Royal London Ophthalmic Hospital Reports. Vol. XIII., Part II., December, 1891 (J. & A. Churchill, London).—The Royal Navy List; London, January, 1892 (Witherby & Co., London).—Archives of Surgery. Vol. III., No. 11, January, 1892 (J. & A. Churchill, London); price 2*s.* 6*d.*—Letter on the Public Health of Newcastle; by R. Call, A.M.I.C.E. (November, 1891).—Transactions of the Ulster Medical Society; Session 1890–91 (A. Mayne and Boyd, Belfast, 1891).—Microscopical Diagnosis of Tuberculosis; by P. Paquin, M.D. (Little Blue Book Co., Battle Creek, Mich.).—The Pharmacopœia of Guy's Hospital; compiled by a Committee of the Staff (H. H. G. Grattan, London-bridge, S.E., 1891).—Pharmacopœia of St. John's Hospital for Diseases of the Skin; compiled by a Committee of the Medical Staff (Geo. Bell & Sons, London, 1891; price 1*s.* 6*d* net).—Tidskrift for den Norske Lægeforening; Januar, No. 1, 1892 (Alb. Cammermeyers, Christiania).—Kronika Lekarska; Roktrzynasty. No. 1, Styczén, 1892 (W. D. M. Ziemkiewiczowej, Warsaw, 1892).—The Imperial and Asiatic Quarterly Review.—Index Medicus: Authors and Subjects; Vol. XIII., No. 12, December, 1891 (Trübner & Co., and Lewis, London).—Magazines for February: Sunday at Home, Leisure Hour, Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARLING, H. G., M.B. Lond., F.R.C.S., has been appointed Consulting Medical Officer to the Tewkesbury Rural Hospital.

BARNES, L. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Hitchin Union, vice Haycock, resigned.

BISHOP, HENRY DRAPER, L.R.C.P. Lond., M.R.C.S., has been appointed House Physician at the London Hospital, Whitechapel, E.

BLICK, G. T. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Islip Sanitary District of the Bicester Union.

CALLANAN, MARTIN, L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Thurles Union, vice Russell, deceased.

COLLINS, E. TENISON, M.B., C.M., late Assistant Demonstrator in Cambridge University, has been appointed Demonstrator of Anatomy in University College, Dundee (St. Andrews University).

CUTHBERT, W. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the First Sanitary District for the St. Columb Major Union.

DICKIE, H., M.B., C.M. Glasg., has been appointed Medical Officer for the Workhouse of the Morpeth Union, vice Clarkson, resigned.

FISHBOURNE, Dr. J. E., has been appointed Fourth Physician to the British Hospital for Mental Disorders.

FORBES, N. HAY, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Tunbridge Wells Borough Salvage Corps.

FORREST, J. S., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the Morpeth Union, vice Hedley, deceased.

FORSYTH, HARRY, A., L.D.S Eng., has been reappointed House Surgeon to the London Dental Hospital.

HANSON, ARTHUR S., M.R.C.S., L.R.C.P., has been reappointed Surgeon and Agent for Stubbington and Warsash Coastguard Stations, Hants.

HARRIS, H. E., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent of the St. Saviour's Infirmary, East Dulwich grove.

HENDERSON, D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Bilston.

HEWITT, R. J., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Tipperary Dispensary District.

LACK, F., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Eastern Dispensary, Bath, vice Hateley, resigned.

M'MASTER, J., M.D., L.M.R.C.P. Irel., has been appointed Medical Officer for the Gleanwherry Dispensary District of the Ballymena Union, vice Hay.

MARTIN, F. G. S. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Central and North Sanitary Districts of the Darlington Union, vice Fraser, deceased.

NORWAY, N. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the St. Columb Major Union.

RICHARDSON, J. C. R., M.B., B.C. Camb., has been appointed Medical Officer for the Benenden Sanitary District of the Cranbrook Union, vice Stevens, resigned.

STEPHENS, D. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Fifth Sanitary District of the Morpeth Union.

THOMPSON, R. E., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Milford Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ASHFORD LOCAL BOARD.—Medical Officer of Health for the Ashford Urban Sanitary District. Salary at the rate of £40 per annum. (Apply to the Deputy Clerk, Ashford, Kent.)

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Resident Medical Officer for two years. Salary £80 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House Physician. Board and lodging provided.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—House Surgeon for twelve months. Salary £100 per annum, with board, washing, and furnished apartments.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary £30 for that period.

KENT COUNTY LUNATIC ASYLUM, Chartham, near Canterbury.—Medical Superintendent. Salary £600 per annum, with unfurnished house, gas, washing for himself and family, and produce of garden.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £85.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Physician.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow-road, W., and 91, Dean-street, Soho, W.—Surgeon to in-patients and out-patients at 91, Dean-street, Soho, W., for two years.

MIDDLESEX HOSPITAL, W.—Second Chloroformist.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant for six months. Board, lodging, and washing provided in the hospital.

PARISH OF ST. LEONARD, Shoreditch.—Clinical Assistant for the Infirmary, Hoxton-street, N. Salary £40 per annum, with rations, furnished apartments, and washing in the Infirmary. (Apply to the Metropolitan Officer, 264, Hoxton-street, N.)

QUEEN'S HOSPITAL, Birmingham.—Casualty Surgeon. Annual honorarium £50.

RADCLIFFE INFIRMARY, Oxford.—House Surgeon. Salary £80, with board, lodging, and washing. Tenable for two years.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon. Board and rooms provided.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, Albert Embankment, S.E.—The Chair of Chemistry.

Births, Marriages, and Deaths.

BIRTHS.

COCKELL.—On Jan. 13th, at Forest-road, Dalston, the wife of Fredk. E. Cockell, jun., M.R.C.S., of a son.

HIND.—On Jan. 8th, at 60, New-street, St. Heliers, Jersey, the wife of Alfred E. Hind, F.R.C.S., of a son.

LEWIS.—On Jan. 17th, at Farleigh, Pontypridd, the wife of B. Morgan Lewis, M.R.C.S., L.R.C.P., of a son.

MALDEN.—On Jan. 24th, at Pembury, Tunbridge Wells, the wife of Walter Malden, M.A., M.B., of a son.

SCOUGAL.—On Jan. 22rd, at 1, Marshwood-road, Huddersfield, the wife of Edward Fowler Scougal, M.A., M.D., of a son.

MARRIAGES.

BANNISTER—JAGO.—On Jan. 21st, at the Parish Church, Irlam, near Manchester, by the Rev. J. R. Courtenay Gale, M.A., Vicar of Christ Church, Sutton (brother-in-law of the bride), assisted by the Rev. R. Martin, D.D., Vicar, Marmaduke Bannister, M.B. Lond., M.R.C.S., L.R.C.P., second son of D. Bannister, Bank-terrace, Blackburn, to Edith Simpson, youngest daughter of Edwin Jago, Paymaster-in-Chief, R.N., Torpoint, Devonport.

GRAY—ROBINSON.—On Jan. 21st, at St. Mary Magdalene's, Canning-road, Addiscombe, Thomas Underwood Gray, L.R.C.P. Lond., M.R.C.S., of Lansdowne House, Essex-road, N., eldest son of the late Thomas Scott Gray, M.D., to Alice Mary ("Sister Alice" of the Mildmay Nursing House), third daughter of the Rev. W. M. Robinson, of Batheaston, Bath.

HINES—BEATTIE.—On Jan. 19th, at St. Barnabas', S. Kennington, Dr. George John Hines, of St. Osyth, Essex, to Annie Louise Ada, youngest daughter of the late Joseph Hamilton Beattie, jun.

JEAFFRESON—HEINTZ.—On Jan. 23rd, at St. Augustine's, Kilburn, John Leslie Jeaffreson, L.R.C.P. Lond., M.R.C.S., of Shanklin, son of the late John Blackett Jeaffreson, of Highbury, to Alice Lavinia, youngest daughter of the late Philip Francis Heintz, of Ealing.

OLIVER—WOODS.—On Jan. 21st, at Long Benton Church, by the Rev. Canon Ellison, M.A., Rector of Melsonby, uncle of the bride, assisted by the Rev. Canon Lloyd, M.A., Newcastle-upon-Tyne, and the Rev. Mr. Grover, Vicar of the Parish, Thomas Oliver, M.A., M.D., F.R.C.P., Newcastle-upon-Tyne, to Emma Octavia, daughter of John A. Woods, Esq., Benton Hall, Northumberland.

OWEN—DAVIES.—On Jan. 21st, at St. Silin's Church, Llansilin Oswestry, by the Venerable Archdeacon Thomas, assisted by the Rev. E. Osborne Jones, Vicar of Llanidloes, the Rev. R. Trevor Owen, Vicar of Llangedwyn, and the Rev. J. Wynne Davies Whittington, John Vaughan Owen, M.R.C.S., L.R.C.P.L., L.S.A., A.K.C.I., to Emma Wigley, eldest daughter of the Rev. D. Davies, Vicar of Llansilin, Oswestry.

DEATHS.

ARKWRIGHT.—On Jan. 21st, at his residence, Radcliffe, Clitheroe, John Arkwright, M.R.C.S., Consulting Surgeon to the L. and Y. and M., A., and S. J. Railway Companies.

BASSETT.—On Jan. 25th, at his residence, 97, Hamstead-road, Handsworth, Birmingham, John Bassett, M.D., aged 66.

BLYTH.—On Jan. 23rd, at his residence, the Slopes, Kingstown, John Blyth, M.D., of Fitzwilliam-square, Dublin, aged 76.

CARPENTER.—On Jan. 27th, at Ventnor, Alfred Carpenter, M.D., J.P., of Croydon, aged 68.

CLAYTON.—On Jan. 26th, at Harley-street, W., Sir Oscar M. P. Clayton, C.B., C.M.G., aged 75.

COLLINGWOOD.—On Jan. 19th, at the Mount, Corby, Dr. Joseph Edward Collingwood, aged 50 years.

DICK.—On Jan 25th, at Queen-square, Lancaster, Forbes Dick, M.D., Surgeon-Lieutenant-Colonel Medical Staff, aged 50.

DREWRY.—On Jan. 17th, at Ramsgate, George Overend Drewry, M.D., aged 52.

EGAN.—On Jan. 22nd, at St. George's Hospital, Francis Egan, L.R.C.P., L.R.C.S. Irel., late of the Fulham-road, S.W., aged 52.

GOODALL.—On Jan. 21st, at his residence, Elvaston-place, S.W., Surgeon-General Abraham Goodall, F.R.C.S., late of the Madras Medical Service, in his 90th year.

HIGGINS.—On Jan. 23rd, at Durning-road, Edge-hill, Liverpool, S. M'Culloch Higgins, L.R.C.P., L.M. Irel., aged 39.

HUTCHEON.—On Jan. 19th, at School hill, Aberdeen, John W. Hutcheon, M.B., C.M. Aberd., D.P.H., aged 30.

MCDONNELL.—On Jan. 20th, at Upper Fitzwilliam-street, Dublin, Dr. John McDonnell, aged 96.

MEIKLE.—On Jan. 19th, at Melrose, Roxburghshire, John Meikle, F.R.C.P., F.R.C.S. Edin.

MUDGE.—On Jan. 21st, at Paignton, Devon, T. H. T. Mudge, L.R.C.P. Lond., M.R.C.S., aged 35.

WELCH.—On Jan. 25th, at Cobham-street, Gravesend, Robert Ryder Welch, B.A. Oxon., M.R.C.S., L.S.A., late of Kenninghall-road, Clapton, aged 83.

WOODHOUSE.—On Jan. 25th, at 11, Putney-hill, Florence, the beloved wife of Thomas James Woodhouse.

WORSHIP.—On Jan. 21st, at Manor House, Riverhead, Kent, John Lucas Worship, M.R.C.S., L.S.A., aged 67.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on January 26th, 1892.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	204	57	..	34	2	297	442
North-Western Hospital	235	35	..	14	..	284	411
Western ,,	102	26	..	15	2	145	220
South-Western ,,	208	46	..	19	2	275	350
South-Eastern ,,	217	16	1	65	5	304	424
Northern ,,	377	22	..	14	..	413	480
Totals	1343	202	1	161	11	1718	2331

SMALL-POX.—*Atlas* hospital ship, 6.

Medical Diary for the ensuing Week.

Monday, February 1.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. A. S. Morton: Affections of Eyelids.—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Liver and Spleen.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. C. S. Tomes: A Tooth attacked by a Fungoid Growth Post Mortem. The President will deliver his Introductory Address, which will be illustrated with Lantern-slides and Specimens.
SOCIETY OF ARTS.—8 P.M. Professor George Forbes: Developments of Electrical Distribution. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Professor W. Rose: The Surgical Treatment of Trigeminal Neuralgia. (Third Lettsomian Lecture.)

Tuesday, February 2.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Mr. J. Hutchinson: Yaws and Allied Diseases.—Bethlem Hospital: 2 P.M., Dr. Percy Smith: Stupor.—Charing-cross Medical School: 8 P.M., Dr. Galabin: Cancer of the Uterus.
ROYAL INSTITUTION.—3 P.M. Professor V. Horsley: The Brain.
PATHOLOGICAL SOCIETY OF LONDON.—Dr. J. Griffiths: (1) Enchondroma following upon Hereditary Multiple Exostoses; (2) Dermoid Cyst attached to the Omentum.—Mr. S. G. Shattock: Inadequacy of the Current Terms applied to Suppuration, with a Proposal; and a Note on Peptone in Pus.—Mr. W. G. Spencer: Rupture of the Spermatic Vein in an Infant simulating Melanotic Sarcoma.—Dr. Norman Moore: Congenital Malformation of the Heart.—Dr. C. B. M. White: Mamma with Carcinomatous and Adenomatous Growths.—Dr. F. C. Turner: Fibrous Atrophy of one Adrenal.

Wednesday, February 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Emphysema and Bronchitis.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. S. Morton: Retinal Affections.—Parkes Museum: 1 P.M., Dr. Louis C. Parkes: House Drainage.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. George Beale and others. Annual Meeting. Election of four Honorary Fellows, and of Officers and Council. Dr. G. Paget Blake: Protracted Gestation. The President (Dr. J. Watt Black) will deliver the Annual Address.
SOCIETY OF ARTS.—8 P.M. Mr. T. Pridgin Teale: Dust, and How to Shut it Out.

Thursday, February 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Mr. A. S. Murray: Some Aspects of Greek Sculpture in Relief.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. G. Sturges: Illustrations of Heart Disease in Children.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Gowers: Bulbar Paralysis.—London Throat Hospital, Gt. Portland-st.: 8 P.M. Mr. G. Stoker: Chronic Glandular Diseases of the Nose and Naso-pharynx.
HARVEIAN SOCIETY OF LONDON.—Mr. Howard Marsh: Senile Tuberculosis.

Friday, February 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Cases of Valvular Disease.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Anthrax (Gram's Method).—Charing-cross Medical School: 8 P.M., Dr. Galabin: The Modern Cæsarean Section.
ROYAL INSTITUTION.—5 P.M. Professor Roberts-Austen: Metals at High Temperatures.

Saturday, February 6.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Dementia.
ROYAL INSTITUTION.—3 P.M. Professor J. A. Fleming: The Induction Coil and Alternate-Current Transformer.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 28th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 22	29·87	S.W.	43	42	52	48	34	·01	Raining
,, 23	29·96	S.W.	48	47	52	51	43	·10	Raining
,, 24	30·07	S.W.	51	50	65	51	47	·03	Cloudy
,, 25	30·39	N.W.	37	36	67	46	35	...	Foggy
,, 26	30·49	N.W.	34	33	50	47	32	·01	Foggy
,, 27	30·11	N.W.	46	45	..	49	34	·07	Overcast
,, 28	30·27	N.W.	40	38	53	45	37	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

ENTERECTOMY.

WE have received from *Dr. H. W. Maunsell*, late lecturer on Surgery, Otago University, a long communication in reply to the statements put forth by Mr. Jessett in his letter to us published in our last issue. The consideration of Dr. Maunsell's communication must remain over till next week.

Mr. R. Robinson.—We are of opinion that such a broadcast distribution of post-cards is much to be reprehended.

Dr. A. B. Blacker.—Surgeon-Major Alcock's paper will be found in *Nature* of Aug. 21st, 1884.

Perplexed.—The climate of India would probably be suitable for such a case.

THE PREVAILING EPIDEMIC.

To the Editors of THE LANCET.

SIRS,—I enclose the latest feelings of an "influenza" patient. Kindly give insertion to the following if you can.—Yours faithfully,

Lower Seymour-st., W., Jan. 25th, 1892. HENRY APPLETON, M.D.

THE INFLUENZA FIEND.

Does he come from out the Orient,
Gathering poison by the way,
From the fever-swamps that fester
In the heat of far Cathay?

Do the powers of darkness aid him?
Does he fury gain and force
In expansive wind-swept deserts,
Or in camps of Tartar horse?

Does he draw the dread miasma
From the wide Mongolian plains?
Do the Steppes of Russia furnish
All his fierce, though shadowy, pains?

All I know, he left me prostrate,
Scarce with strength to lift a straw;
That he shook me in his talons,
And he struck me with his claw.

Windsor. A. COALE.

POLICE CAUTION.

WE are requested by Mr. Anderson of New Scotland-yard to publish the following:—

"Members of the clerical and medical professions are cautioned against a man who for some months past has been carrying on a system of fraud in various parts of London. His mode of proceeding is to call on clergyman and doctors, and introducing himself as being connected with a firm of shipping agents, he states that he has been commissioned to obtain suitable lodgings for a young gentleman who is about to arrive in London, and asks to be recommended to persons having furnished apartments to let. He then goes to the address given, takes the apartments, and in payment for rent in advance tenders a worthless cheque for a larger amount (usually written on plain paper), and receives the balance. His description is as follows: Age, about forty; height, 5 ft. 6 in.; pale face, hair and moustache dark brown, slim build, gentlemanly appearance, and of good address. The police hold a warrant for his arrest, and it is requested that he may be detained and handed over to a constable."

Dr. Jas. Oliver.—The paper is under consideration.

SICILY AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Medical practitioners are often consulted, and sometimes puzzled to answer their patient's question—"Where shall I go this winter?" Will you allow me to supply an answer that will suit very many valetudinarians? I am of that unhappy class myself, having inherited a cough from my father, and having been unceasingly troubled by my continuous barking. I have tried Algiers, and found it wet and windy; the Canary Islands and Madeira, and I have not a word to say about these lovely islands except that they are dull. I have tried other places with more or less success; but I never, in any part of the world, found a country that for health and amusement can equal Sicily. A patient should go to Palermo first—that is to say, in November and well on to Christmas; the climate then and there is perfect. After the middle of December he should go south, say, to Syracuse, a very warm place and the most historically interesting on this earth; and after a week among the remains of Greeks, Romans, Saracens, and Normans take the rail to Taormina. There is in that on-a-cliff-mountain town an hotel or pension kept by an English gentleman and his wife; an old thirteenth-century convent, with the far-famed Greek theatre behind the house, Saracen and Roman tombs in front, hoary-headed Etna at the side, and straight before one the Straits of Messina and the Calabrian Mountains. From his window one can see the rocks on which the sirens sat, the home of Circe, Scylla, and Charybdis, and below the site of Nanos, the earliest Greek colony. But, best of all, one can breathe. I have kept no record of the thermometer; but I can say that since I landed in Sicily, on Nov. 1st, I have only had a day and a half of wet weather. All else has been perpetual sunshine. The air is dry and warm; windows are always open. We sit out in the garden or on the balcony all day, and some of us on the latter under the stars till eleven at night. I have never anywhere experienced such a climate or such a place of perfect rest as the Pension Santa Catarina at Taormina, nor a place more abounding in botanical, geological, and archæological remains than this most magnificent spot on this historical island.

I am, Sirs, yours faithfully,

Castello, Catarina, Taormina. GEORGE PYCROFT.

THE TREATMENT OF POISONING BY NARCOTICS.

To the Editors of THE LANCET.

SIRS,—If this letter contains a new suggestion, and one worthy your columns, please admit it.

Would it be a new treatment, and worth trial, in cases of poisoning by opium, belladonna, or other narcotic, after the failure of ordinary remedies, to practise intravenous injection of normal saline solution, with a simultaneous or immediately prior venous bloodletting? It would seem to be a quick and safe means of washing out the tissues, and so lessening the actual and relative quantity of poison contained in them From one to four pints of blood could be shed, and as much or a third more normal saline solution injected. If thought well, the method could be repeated after a fair interval; but I pass by detail. If it has not already been done, would it not be worth while to experiment in this direction on some of the lower animals (dog?) at one of our licensed laboratories? I am, Sirs, your obedient servant,

Worcester, Jan. 25th, 1892. T. BATES.

AINHUM.

To the Editors of THE LANCET.

SIRS,—In your issue of Dec. 12th, 1891, in an article headed "Ainhum," referring to twenty cases of the disease treated by Mr. Von Winckler of British Guiana, I find you say, with regard to treatment, "this seems to resolve itself into removal." I merely write to say that about a year ago I treated a case of the kind successfully, and in a very short time, by dividing the skin and all the tissues down to the periosteum on the side opposite to the seat of the disease. The parts looked so very much as if they had been ligatured, that division of the internal ligature, whatever it might be, naturally suggested itself to me. I may mention that the patient had had the disease in the opposite foot some years previously, while residing at Barbados, and that the usual treatment had been adopted there (amputation), and that he really came to me for the purpose of getting the toe removed.

I am, Sirs, your obedient servant,

Trinidad, W.I. THOMAS MURRAY, G.M.O.

"AFRICAN FEVER."

Dr. Harford-Battersby, medical missionary on the Upper Niger, in an interesting communication which is too lengthy for publication *in extenso*, calls attention to the want of knowledge of African fever and the desirability of a thorough study being made of it. He says:—

"It may be urged that so much has been written about Indian fever that therefore we have no need of special study of African fever, but I believe that in many respects the malarial fever of Africa (which I have alluded to above under the title 'African Fever') is in many ways very different. For instance, one of the most fatal manifestations of malarial fever in West Africa in recent years (and curiously it has only been commonly noted in recent years) is the occurrence of hæmaturia or hæmoglobinuria in such a marked way that this is usually called 'Blackwater Fever.' I know several medical men besides myself who suffer from this form of fever. Surely we ought to get at some useful results by collecting evidence from all possible sources, so that we who may be called to work in these regions may have a scientific basis to work upon. It is not for me to dictate the lines that such an inquiry should take, but among other points the following questions seem to be important. 1. What forms of malarial fever do we find in tropical Africa, and what special symptoms or complications are generally met with? 2. What special localities or changes in climate seem to favour the production or development of the fever? 3. What do we know of the value of preventive measures, either hygienic or medicinal? 4. What evidence is there of the presence of a specific micro-organism, and does it correspond with the malarial bacillus which has already been described? Many other interesting points might be brought out by the inquiry, and perhaps some light might be thrown on some of the other specific fevers."

As far as we are aware, the only lectureship in tropical diseases in our British medical schools is held by Dr. Felkin of Edinburgh, who was formerly a medical missionary in East Africa. It is possible that this gentleman would be willing to assist in such an investigation as Dr. Harford-Battersby suggests.

MEDICAL REFORM.

To the Editors of THE LANCET.

SIRS,—The question of medical reform is in the air. It has been there for some time, and almost seems as if it cannot be brought down to earth, in spite of the efforts of various societies and individuals. If we are to have reforms, we must know exactly what we want, and I beg to suggest that a Charter should be drawn up embodying the necessary reforms, and then that the question should be brought to the front, and kept there, until our social and professional position has been gained; and it shall be taken for granted, even by the ignorant of the British public, that a doctor does not keep a shop for the sale of "bottles of stuff" more or less potent. The points of the Charter strike me somewhat as follows, but I write with reserve and subject to correction. 1. That our Council shall obtain increased powers to deal with matters affecting the general well-being of the profession, and that it shall represent the different sections as far as possible in proportion to their number. 2. That definite lines of policy shall be laid down with regard to charitable and provident work, and that no public work of this kind shall be undertaken by any member of the profession which does not comply with the conditions deemed fair and reasonable, both to medical men and the poor whom they desire to benefit. 3. That dispensing by medical men, except in case of emergency, be strictly prohibited where a chemist is accessible. 4. That the law against prescribing by chemists shall be strictly enforced, and that they shall not be allowed to supply any drug (with the exception of certain scheduled household remedies) without the prescription of a qualified medical man. 5. That the chemists' stores shall be periodically inspected to ascertain that their drugs are of good quality. 6. That all "patent medicines" shall be registered subject to a declaration of the active medical ingredients. If these lines of policy were followed the medical profession would become professional. *Advice* would be regarded as worth more than the medicinal compounds which form only one part of treatment, and medical skill would not, as now, be regarded by many good people as bounded superiorly by a cork, and in other directions by bottle. Provident associations can go on wherever they are desirable. Chemists will be glad to supply medicines for them at a nominal profit if they get more private dispensing. Public bodies will have to make arrangements for the supply of medicines for poor people. In many large towns they have already done so. Not only should we gain in time for diagnosis, but also in self-respect. While freely working for the poor in charitable or semi-charitable ways, we should insist on adequate payment from those who can command everything but medical attendance at ordinary rates, but who prefer to take advantage of low and disreputable contracts.

I am, Sirs, your obedient servant,

Loughborough, Jan 2nd, 1892. J. B. PIKE.

CARPENTER AND DUKES FUND.

To the Editors of THE LANCET.

SIRS,—Please insert the following additional subscriptions to the above fund in your next issue, and oblige yours faithfully,

50, George-street, Croydon, Jan. 24th, 1892. WM. F. COLES.

Mr. W. C. Blaker ..	..	£0	7	6	Dr. A. B. Carpenter	..	£2 2 0
Dr. C. B. Richardson	..	0	5	0	Dr. E. W. Du Buisson	..	0 10 6
Dr. Withers Moore	..	2	2	0	Mr. T. A. White ..	..	1 0 0

RESTRICTIONS ON PRACTICE IN CANADA.

L.R.C.P. Lond. & M.R.C.S.—The readers of THE LANCET have already been put in possession of the change made by the province of Ontario, which requires gentlemen wishing to practise in that province to pass an examination, even though they may be qualified and registered in Great Britain. As some of the Colonial Legislatures, as well as those of the United States, are inclined to make changes restricting medical practice to their own graduates, it is unwise for gentlemen to go out meaning to practise without making inquiries from official sources as to the exact state of the law at the time.

A Physician.—The conjoint qualification does not entitle its holder to put "Dr." on his card.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Atkins, co. Cork; Dr. Appleton, London; Mr. Alderson, London; Mr. Anderson, London; Mr. Blackett, London; Mr. Birchall, Liverpool; Mr. Lennox Browne, London; Mr. Bridgman, Taormina; Mr. C. F. Beadles, Colney Hatch; Dr. C. F. H. Battersby, Lokoja; Mr. Bassett-Smith, Hong Kong; Mr. Bowelz, Berlin; Mr. T. Bates, Worcester; Mr. Bulger, Wolverhampton; Mr. Brown, Westgate-on-Sea; Dr. Boobbyer, Nottingham; Mr. Burghard, London; Mr. Briggs, Liverpool; Dr. W. Bennett, Manchester; Mr. Barford, Wokingham; Messrs. Clay and Sons, London; Mr. Chavasse, Birmingham; Miss Coleman, Hyde-park; Mr. Corbet, London; Mr. Crerar, Maryport; Mr. Chapman, London; Dr. Coles, Croydon; Mr. Collins, Birmingham; Mr. Clark, Wolverhampton; Mr. Dougall, Londonderry; Messrs. Drake and Gorham, London; Mr. A. Doran, London; Dr. H. B. Dow, London; Mr. Davenport, London; Dr. W. A. Evans, Bradford; Mr. J. R. Ellis, Llandudno; Mr. Eccles, London; Messrs. Foster, Brown, and Co., Montreal; Dr. J. L. Firth, Bradford; Messrs. Fannin and Co., Dublin; Dr. Galloway, London; Dr. R. F. Gill, London; Dr. A. E. Garrod, London; Dr. Gondoux, Switzerland; Dr. Gilbert, Baden Baden; Dr. Horden, London; Mr. Hawkins, Nice; Messrs. Harrison and Sons, London; Mr. Hulme, Birmingham; Dr. A. W. C. Hallen, Altoa; Mr. Heatly, Treharris; Mr. Hannaford, London; Mr. Hind, Jersey; Mr. Holding, London; Mr. Huntsman, London; Mr. Huxley, London; Mr. Jeffreys-Bowen, Brecon; Mr. Jones, South Hackney; Mr. Keely, Nottingham; Messrs. Keen, Robinson, and Co., London; Miss Lea, Thame; Mr. Lewtas, Blackburn; Messrs. Longmans and Co., London; Mr. Lush, Great Yarmouth; Mr. Maunsell, South Kensington; Mr. W. J. C. Miller, London; Messrs. Mitchell and Co., London; Dr. Mott, London; Dr. Marshall, London; Mr. Mansell Moullin, London; Dr. Murray, Trinidad; Dr. Morison, Hartlepool; Mrs. Marshall, London; Miss Murphy, London; Mr. Muncaster, London; Mr. Marris, Grimsby; Dr. Newsholme; Dr. Newth, Hayward's Heath; Dr. J. Oliver, London; Mr. Oliver, Manchester; Mr. S. Paget, London; Mr. Pentland, Edinburgh; Mr. Packard, Philadelphia; Mr. Preston, London; Mr. Parker, London; Mr. Peck, New York; Mr. Parkhurst, London; Mr. Roughton, London; Mr. R. Robinson, London; Mr. Roberts, London; Dr. St. J. Roosa, New York; Messrs. Richardson and Co., Leicester; Mr. Rossier, Canterbury; Mr. Stockton, London; Dr. Shepherd, Pau; Messrs. Smith and Son, Manchester; Dr. Saundby, Birmingham; Mr. Shaw, West Hampstead; Dr. Spencer, St. Leonards; Professor A. H. Smith, New York; Dr. Sisley, London; Mr. Symonds, Oxford; Messrs. Smith and Co., London; Dr. Snodgrass, Glasgow; Mr. Smith, jun., East Tennessee; Dr. Stone, Brightwood, U.S.A.; Messrs. Smith and Son, London; Mrs. Southam, Manchester; Dr. Sternberg, San Francisco; Mr. Stilliard, Birmingham; Dr. Smeddle, Darlington; Dr. Sunter, Isleworth; Mr. Spencer, Barford; Dr. Thresh, Chelmsford; Professor Tait, Birmingham; Mr. Thin, Edinburgh; Mr. Pugin Thornton, Canterbury; Dr. Quicke, Manchester; Messrs. Witworth and Stuart, Manchester; Mr. Woodland, London; Messrs. Waterlow and Sons, London; Mr. C. Williams, London; Messrs. Wright and Co., London; Dr. Wace, London; Dr. Waters, Liverpool; Dr. McCook Weir, Bournemouth; Messrs. Wyleys, Coventry; Messrs. Wright and Co., Bristol; Mr. Williams, Shrewsbury; Dispenser, London; Balm of Bethesda Co., London; Graduate, London; Clerk, Dorset County Hospital; J., London; Domus, London; Centum, London; Sister Louise, London; Gamma, London; G F., London; Secretary, Cardiff Infirmary; Surgeon, London; P., London; Perplexed; Amicus; A Physician; W. E., London.

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